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Lectures
upon
the Practice
of
Physick
by
W^m Cullen M.D.

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70

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1.

Class I. Ordo II. Phlegmasia.

It is very necessary that this Order be distinguished from Febres on the one hand and Exanthemata on the other. Sauvages & Linnaeus have separated Febres from Phlegmasia; but Vogel unites them under the general title of Febres. Systematics have fallen into a more considerable mistake, for they have separated them into External and Internal. (Inflammation). Linnaeus has said that the external Phlegmasia is the Prototype by which all the others may be explained, for that they cannot be separated unless that Phlegmon is a topical affection without fever. In our definition of Phlegmasia we sufficiently distinguish it from the febres and the other Orders. We say it is "*Pyrexia cum Phlegmone vel dolore topico, simul laesa pars interna functione, sanguis misceus et jam concretus superficiem coriaceam albam ostendens.*"

In the above character you will observe I have added the state of the Blood notwithstanding De Haen's doubts.

So much of the Character of the Order. We shall now

now proceed to examine the Genera.

We have marked no subtle distinctions, as Sauvages & Linnæus have, into membranacea and Parenchymata. Though I have marked no such divisions, yet I have a plan in view. Thus Genus VII Phlegmone, & VIII Ophthalmia, are put together because they are Inflammations of an external visible part. Genus XXII & XXIII are much alike though in many particulars distinct.

Phlegmone, Genus VII.

I agree with Linnæus that this is to be considered as the Prototype of Inflammation, with this advantage that these are obvious to our senses. The character is, "Dyrexia; partis externæ rubor, calor, & tensio dolens."

Now go on to consider the Proximate Cause of the Phenomena. We meet with difficulty in every part of such a work, but I hope not considerable.

First I say then that these symptoms shew an increased impetus in the Vessels of the part affected, and this easily and obviously accounts for these phenomena. With respect to the Rubor it has been ⁱⁿ difficulty explained. It has been supposed to be owing

+ Haller was the first Person who opposed this
Doctrine of Boerhaave's.

Phlegmone.

3.

owing to red blood entering the vessels that do not contain red blood in their natural state. Haller^t denies this Error loci; but thinks it is owing to an accumulation of red globules only in the smaller vessels. Whether it be owing to an Error loci or to an accumulation of red globules it must equally be referred to an increased impetus. With regard to the calor many questions might here arise; but we are not concerned therein as increased motion always produces increased heat. From whatever cause increased impetus arises, whether from distended vessels admitting grosser fluids, or from the accumulation of red globules, the distension will be the cause of pain; therefore the proximate cause of Inflammation is an increased impetus of blood in the vessels of the part affected.

We perhaps might find enough in this to conduct us in our practice; but it is proper to go farther and enquire into the cause of the increased Impetus. This depends on a Stimulus somewhere applied. I have formerly taught you to distinguish between direct and indirect Stimuli.

The direct Stimuli are those which are immediately applied, and by their Mechanical Stimulus occasion Inflammation.

Phlegmone.

4.

Inflammation. Thus we find every thing applied that can give a painful Impression, if it be permanent enough, will produce Inflammation. — With regard to such taking place in internal Inflammations there is much doubt; therefore indirect Stimuli have been thought of. Bellini & Boerhaave have thought Obstruction to be the cause of Inflammation. They think from whatever cause obstruction given be, that it must increase the quantity of fluids, and produce a greater velocity in the neighbouring vessels that are full, which may be extended to the whole System; and thus they say that they account for increased impetus.

Of late many Objections have been urged to this System, and especially by Haller who refuses Obstruction altogether. He first alledges that the motion of the blood in the extreme vessels is so slow or it's impetus so little, that it can easily be inverted, by making a retrograde motion. From Microscopic Observations he says that a Globule of blood upon meeting with Obstruction turned back and went off by a neighbouring Anastomosis; and hence thinks that Obstruction can hardly be the cause of Inflammation.

This

Phlegmone.

5.

This however must be considered cautiously, for his Observations were made on Amphibious Animals; whether this would happen in Animals of warm blood is not ascertained; but he says that the vessels of Animals will admit of very easy dilatation, and would insinuate that the smallest vessels will on occasion admit the grossest part of our fluids, as red Globules, so that red globules are passed out constantly without rupture. The great difficulty in the second part is that in the neighbouring vessels the blood is not increased and unless some cause concur the Obstruction will not cause a more quick but a more slow circulation.

It is further added that the Obstruction proposed in most Inflammations is by no means equal to produce any considerable impetus in any of the neighbouring vessels. Haller has made Ligatures in large vessels, which had never any considerable effects on the System; so likewise in Aneurisms. The effects then of Ligatures on the System are not considerable. Van Swieten is of another opinion; he speaks of a Ligature made on the descending Aorta, and that considerable effusions were made in the upper Extremities, and the Animal

soon killed by Inflammation. This is not a fair Experiment to apply in the case of Inflammation as the vessel was so large. The disease arising here was not owing only to the obstruction, but to a ~~ligature~~^{Vessel} so near the heart prevented in emptying itself, and thus it exerted itself with greater force, and by this increased impetus the Phenomena observed by him was produced. — These Experiments only shew that if Obstruction be a cause of Inflammation it is only by acting as a Stimulus. — This is reconcilable to our general doctrine that it depends on an increased Impetus.

We therefore return to where we set out that Inflammation arises from an increased Impetus of the part from Indirect causes; notwithstanding what Haller has said I say that there is more or less of obstruction in the parts. Let us see how Obstruction may prove a Stimulus.

The distension of the vessels is the ordinary Stimulus to their action, and when this is increased their action must be increased also. Hence an accidental difference in the distribution of the blood may excite the action of the vessels of the part, and this will be more especially if a
constriction

constriction occurs at the same time, which is most commonly the case. This is particularly illustrated by the case of Rheumatism, which is commonly owing to cold applied to a particular joint. But it commonly requires, that whilst the Constriction is thus produced by cold, that the vessels be rarified by heat or increased impetus. Thus we know, that if the parts are rarified by heat, that then cold acts especially by producing Rheumatism. So that it seems to depend upon an unusual constriction of vessels of a part - or from an increased impetus of the fluids rushing into parts not easily admitting of dilatation. — Inflammations most commonly arise from increased Impetus and Cold, as is the case in the most common Inflammation as of the Fauces and Thorax which makes the far greatest part of Inflammations. — This does not exclude direct Stimuli.

A great part of our doctrine still remains. — It consists especially in the increased Impetus of the Vessels of the parts. The over distension produces a spasmodic affection of the extreme vessels which is the principal cause of the Obstruction; the prin-
cipal

Principal Stimuli which support the increased Impetus. I conclude this because most Phlegmasia are attended with fever and begin with a cold fit in which I think a Spasm is formed, as I said before when on Fever; And this Spasm is the means nature employs for keeping up an increased impetus. It must be considered as an effect of the System determined by certain laws, especially when debility or resistance are to be overcome, which we cannot explain, as in Fevers: So I explain it in the case of Inflammation. If you admit it, you will easily see how Obstruction can cause Inflammation.

I have entirely avoided the supposition that Obstruction depends on a state of the fluids (their acquiring a Lensor) as such a supposition is purely hypothetical.

The Crust was supposed to be a morbid appearance, but now we know that it is a natural appearance. They say it is in unusual quantity, but they have never proved it. It is the effect, not the cause of Inflammation. Thus if we bleed a person to day who is to have Inflammation to morrow, we find none of these appearances. We might use

Phlegmone.

9.

use many other Arguments. If the Sensor was so considerable it must operate in all the System as well as in these few vessels.

I go on to observe that in so far as we have explained Phlegmasia that it often agrees with Fever, but there is this difference in Phlegmasia that there is the topical affection that encreases the tone and action of the Arteries of the part, and this may be easily communicated to the whole System.

I shall here shortly again give you the heads of Inflammation.

Inflammation, I say, consists in an increased Impetus of Blood in the vessels of the part affected. As this increased impetus is often purely topical it consists in an increased action of the vessels of the part; and I think it is agreed that there is no more proof of the muscular power of Arteries than of the Phenomena of Inflammation being topical.

We find that this increased impetus must depend on Stimuli which may be of two kinds

- 1.st From Acrid Substances applied to the part.
- 2.^d From Stimuli producing an unusual distention of

of the vessels of the part. — It is not often that we can distinctly perceive the former, and therefore we must suppose the latter to be the frequent cause. This last Head then must depend either

1. On an increased quantity of fluids distributed to the vessels affected; or

2. Any resistance arising in the vessels of the part to the transmission of the usual quantity of fluids; which resistance may likewise be of two kinds;

1. From fluids of an unusual size not passing through the vessels, which is called Obstruction.

2. From some power externally compressing or constricting the vessels. — If you look into Boerhaave you will see various causes that may give the state of fluids obstructing the vessels. I would not refuse the case of fluids obstructing altogether, but it is a very rare occurrence. —

The other cause, viz, the constriction of the vessels, is more evident, and probably most Inflammations are to be referred to this, an unusual increased derivation concurring with some power constricting the vessels at the same time. This is particular in Rheumatism and Angina. Some difficulties however remain. We have not

not obviated all the difficulties Haller has brought to this. Anastomoses readily obviate this obstruction, or transmit the unusual quantity. — I must say that it is a circumstance of distention that produces Spasm, which is that which produces such a certain increased action of the Arterial System in fevers, especially as we know that most the greatest part of Inflammations are ushered in by a Cold fit. This Cold fit is the means that the Economy employs when any debility or state of Resistance is to be overcome in any part of the System. From the concurrence of Spasm we must understand the concurrence of Fever. [In an unusual degree and length of time increases the Tone & stimulates the Arterial System.]

The Irritation in Phlegmone depends on a topical affection that increases the action and tone of the vessels of the part, which may be communicated to the System, and chiefly consists in communicating a Phlogistic Diathesis to the System. —

Phlegmone differs from proper fever in having Diathesis Phlogistica conjoined with it. — Whatever may be said of the dependence of the Vis Insita and the Vis Nervea they may be very separately considered

considered. When an Irritation is made on a Muscular fibre its contraction may be in consequence of a determination of Nervous fluid into the part; but it may be independent of the brain. It may be in unequal force from causes determining the *Vis Nervea* to flow in, in unusual quantity, or from any thing that encreases the *Vis Insita*. This last is what we call the Tone of a part.

I infer that Inflammation consists in an increased tone, from

1. The Causes of Inflammation.
2. The Circumstances attending it.
3. The Cure.

I. From the Causes. In proportion to the tone of the System being vigorous are they liable to Inflammations. Hence Hippocrates says that those persons who are liable to peculiar Atonia in the System are not liable to Pleurisy, Peripneumony &c.

The *Vis Insita* of Muscular fibres depends on their tension, hence those who have a plethoric state are more liable to Inflammatory diseases — and also Cold, which increases the Vigour & Tone of the System, predisposes to Inflammatory diseases.

Occasional

Occasional causes afford the same conclusion.

1. Cold applied to any part, in an unusual degree and length of time, increases the tone and stimulates the Arterial System.

2. Direct Stimuli, this is ambiguous as they may act both on the *Vis Nervea & Innata*, but they particularly act on parts to which they are applied.

The long continuance of Tonic Medicines, as *Cortex Peruvianus*, renders people obnoxious to Inflammatory Diseases.

II. But the nature of *Diathesis Phlogistica* appears from the Symptoms of it likewise; as the increased action and heat of the System, the strength of the pulse, and above all from the hardness of the Pulse, a manifest increase of tone and constriction of the Arteries. The hard pulse is no otherwise accounted for than that the Arteries embrace the blood more closely, or do not admit of dilatation.

III. The nature of the *Phlogistic Diathesis* is inferred by the Lure, which is bleeding.

Bleeding induces a Relaxation on the Arterial System, which is often evident from the moment the vein is opened. If you take notice
of

of Dr. Haller's *vis Derivationis*, that as soon as a vessel is opened there is a derivation from all the parts to it, nothing explains the exquisite tension of the system better than this. It is I think very evident then that the *Diathesis Phlogistica* does not depend on the state of the fluids but on an increased tone of the *vis Innata* of the Arteries themselves. Though the affection be very topical often, from thence it is communicated not only to the neighbouring parts but to those at a considerable extent. It is not here to be referred to any obstruction or change in the Vessels, but in proportion to the stimulus being in more sensible parts, as, under the nail a thorn inflames up to the shoulder, and is communicated from tendons to Muscular fibres, which have no communication but as part of the same Nervous System. Sometimes one part of the body is affected with disease whilst the other is not, as Eruption &c, which cannot be accounted for on any communication of vessels but from an affection of the Nervous System having a disposition more readily to communicate to one side of the Body as it is certainly separate on each side.

The

The chief difference between Phlegmasia and Fever is, that ⁱⁿ the former there is a Diathesis Phlogistica with an increase of the Vis Insita, whereas in fevers it depends more on the Vis Nervæ being encreased.

In Phlegmasia there are not these symptoms of putrescence &c. as in Fevers, which is a proof that whilst fevers depend so much on contagion no phlegmasia are contagious unless when symptomatic.

It is attended with several consequences and effects which are to be, I think, considered as parts of the same disease. Our Nosologists have separated Abscess and Gangrene from Phlegmasia. It is a fault that is liable to confound us. All these diseases which I have put as Sequela are not to be separated from the Genus.

I. If the Resistance that occurs in the vessels of the part, whether depending on Obstruction or Spasm, be such as in due time yields entirely to the encreased Impetus that occurs, the consequence will be that the Inflammation must cease and matters will go on as

as before. This Termination is what we call
Resolution.

II. It is rare that matters proceed thus; more commonly there is an effusion of fluids into the Cellular Substance of the part. We might imagine the Tumor in Inflammation might be owing to an accumulation of fluids contained within their proper vessels, but this will not account for the large Tumor that sometimes occurs. It must be owing to some Effusion. There is always an exhalation in the Cellular texture which may be in this increased Impetus be increased. Actual proof of it has also been brought. If the effusion be only an increased quantity of the usual fluids which are constantly reabsorbed, we have only in the way we have said of resolution to account for it by saying no fluids are effused but such as are readily reabsorbed. — These are the cases of the most favourable termination of Inflammation by Resolution.

III. But it may be an effusion of Fluids not usually poured out, and hence not so readily absorbed and hence liable to a longer stagnation, if

if any by such stagnation may be liable to change into Pus, then another change may happen called Suppuration. The formation of Pus formerly appeared mysterious; it is now become a simple affection & easily explained. If you look into Boerhaave, Graafius, and Quensai, you will find what a difficult and mysterious thing they made of this affair, which is now so easily explained. - I can deliver the doctrine simply and clearly myself.

It is now known that it is formed of a certain portion of natural sound fluids in a certain stagnation and a certain degree of heat. This heat applied to stagnated fluids is probably a species of fermentation with a considerable generation of Air. Haber says a quantity of Air is generated that is often sufficient to burst strong vessels that are applied to confine and receive it. It is such a serum as is constantly separated from extravasated blood, and this holds the Gluten dissolved, for from every experiment of Pus there results a quantity of Gluten. It is coagulable lymph with a certain portion of Serosity joined to it that
is

is the proper subject of Pus, but the other fluids are not fit for the same change. If red Globules are mixed with the Serum, the fermentation is of a much more putrid nature; the same with Bile &c.

It appears that this termination by Suppuration especially depends on a state of effusion; if the effusion is of the ordinary nature constantly exhaled in the cellular texture. How long this remains till it is reabsorbed we shall not enquire.

The ordinary Halitus is not sufficiently impregnated with gluten to undergo this change, hence it is soon reabsorbed, or it remains as in the Dropsy. We find it stagnating for a great length of time without any change; therefore we suppose it depends on the state of effusion or the quality of the liquors exuded by the vessels, the impetus of the blood dilates the calalent vessels to a great degree, and we find suppuration to be accompanied with a great impetus of the blood, and the whole system is under a great degree of Impetus from the horripilations accompanying the beginning of

of Fever.

It is not merely a condition of Impetus of the blood to dilate the vessels. When a more gross serum is poured out the vessels are relaxed & Suppuration is begun; but the vessels must be so situated as to open into a lax cellular substance that admits their contents. When a wound is first made many vessels are opened and fluids promiscuously run out. After the Bleeding the Orifices of the vessels contract & the bleeding ceases, but yet through contracted vessels a portion of thinner fluid exudes. This depends on the size of the vessel, as the consistence of the fluids diminish in proportion as the orifice of the vessel is contracted and comes near to a point; but the appearance of Pus is not evident till Symptoms of new Inflammation comes on the wound. If from any cause the tone of the vessels are diminished the state of the effusion varies and does not furnish proper Pus. The tardy Suppuration of wounds and stubborn ulcers are explained on this supposition.

In an abscess perhaps Pus is often formed merely by the Anastomoses & vessels, but it is probable
in

in most cases the effusion is made by a rupture of vessels, and then is analogous to the case of wounds. We universally find texture of the part destroyed; this may be owing to erosions of the Pus, but in many cases this must be owing to the vessels ruptured. This leads me to enquire whether Pus ever appears but in consequence of ruptured or eroded vessels? If we consider the case of wounds and abscesses we shall think it depends on rupture or erosion, and this is the general opinion.

Objections to the production of Pus in the circulating system.

1. Because Pus requires stagnation in every case we examine.

2. As a fermentation it would be stopped by the agitation of the circulating fluids.

3. The impossibility of producing Pus when red Globules are mixt.

Dr. Haen doubts whether Pus may not be produced without any destruction of texture, but he joins a supposition that Pus may be produced in the entire vessels in the circulating system. This is improbable, for Pus depends on stagnation of

of effused fluids, and never exists but in these circumstances. I alledge the change of Serum into Pus is by a fermentative process. It is well known in Chemistry that a ferment cannot go on in motion, but only in stagnation. Besides to the formation of Pus, ^{it} is necessary that this part of the fluids should be separate by itself and if intermixed with red globules it disturbs the formation of the Pus.

The other part of De Haen's opinion, viz, that Pus may arise without rupture or erosion is more probable as we have said that in abscesses there seems often to be nothing more than Anastomoses. The notion is probable,

1. From purulent effusions covering the surface in Abscesses.
2. Actual pus discharged by the Paracentesis, where dissection has discovered no wound, abscess, or erosion. - Whether Pus may not be produced, without rupture or erosion of vessels, by Anastomoses or Dilatation, such as occurs on inflamed surfaces of all inflamed viscera; these shed an exudation on the surface that resembles ordinary pus. We observe the ordinary halitus
or

or effusion in this case considerably increased, and more or less of such purulence beginning. Though most of the fluids in Ascites preserve their serous form in tapping, yet on inspecting the viscera we find them covered by a purulent, serous matter. Gaber distinguishes between two cases of these, but we say that there are some cases where the whole of Serum in Dropsy was reduced to Pus, and nothing but Pus was drawn off in tapping, and from Experiments of Gaber this is supported by a fair Analogy that nothing but certain matters are capable of being changed; hence we agree with De Haen of Pus being formed without rupture or erosion. Pus has been spit up from the Lungs where no Ulcer appeared. The fluids being effused into the Bronchiae, and stagnating there, were probably the cause of its production. In some patients De Haen says that they vomited Pus without any appearance of Abscess; but this might be thrown out from Matter in the Bronchiae. We can from our Doctrine have a view of the causes of Pus. In flaccid Ulcers we may see a defect in the quantity of Gluten which is the cause of the
tardy

Gangrene is generally referred to the excessive action of the vessels, but more to powers affecting their tone, hence Gangrenes so liable to be induced by Cold, Narcotics Palsy &c. Improper Absorption, giving occasion to a longer stagnation, and the Mass of blood may be so stopped in the extreme vessels as to make it stagnate and produce Gangrene, and hence the effect of Compression in inducing Gangrene.

tardy production of Pus.

Quesnai mentions two species of Suppuration

1. That which follows upon Inflammation.

2. That which accompanies wounds, which he says is not Inflammatory. But this is erroneous as there can be no Suppuration without Inflammation preceding.

Pus is varied by the introduction of red globules, and by the state of absorption. The effusion and absorption both depend on the tone of the vessels. If Pus be allowed to remain fixed with Serosity it becomes putrid, but here we may suppose absorption takes up not only the thinner but also the more gross fluid. The variety in abscess depends much on the tone of the vessels, and on this absorption and effusion depends.

Gangrene often depends on the Impetus of the fluids being too much increased & its effect is the effusion of the grosser fluids, red globules, which undergoing the heat that occurs are disposed to putrefaction. But a loss of tone in the vessels has the greatest share in the change to Gangrene, because those powers destroying the tone of the vessels determine
to

to Gangrene, as Cold &c. We find not only actual but potential cold has some effects. Narcotic Astringents have been often found the cause of changes to Gangrene, and these Gangrenes are so liable to occur from loss of tone in Palsys. Where a want of muscular motion weakens the circulation or palsy affecting the muscular fibres of Arteries then Gangrene is the consequence, and those causes that affect Absorption first affect the tone of the vessels and give occasion to that putrescency of the fluids that constitutes Gangrene. I would then refer Gangrene chiefly to loss of tone. I say it is either the effect of Globules extravasated or the stagnation of these in vessels that produce putrefaction. We see Globules effused in Echinymosis without the consequence of Putrefaction; but here is an absence of Inflammation, and hence the heat that has such a share is absent and the integrity of the Absorption remains, and this explains the innocence of the effusion in Echinymosis without Gangrene following. If fluids are in an entire state and effused and again are absorbed no mortification happens but in Gangrene the Mass of fluids are already tainted

tainted with a putrid ferment depending on a loss of tone which occasions more copious effusions; this is the case with the large spots, in putrid fevers, on the surface of the body.

In Gangrene Putrefaction extends only to the stagnating mass; but in Sphacelus it is universal, and there is a generation of a subtle putrid matter which destroys the tone of the whole Nervous System. It differs only in degree however from the Gangrene, as they are one disease.

This then is the consideration of the three general terminations of Inflammation by Resolution, Suppuration and Gangrene. Authors mark a fourth, viz, Schirrous. This is very obscure. — It is universally agreed that this termination affects only Glandular parts, and is not one of the common or general terminations of Inflammation. Schirrosities where they occur do so for the most part without the prevalence of Inflammation by fluids poured out into the Glandular parts, from the causes affecting the tone of the vessels. Where Schirrus follows Inflammation, it is to be suspected that it occurs from the common cause of Schirrus rather than from Inflammation, but the determination

+ Two other terminations of Inflammation are
described in Dr. Fuller's First Lines of the Practice
of Physick; which see.

tion of this we could not determine without entering on the subject of Schirrus which is very obscure.

I have now mentioned to you the four terminations that the Schools have noticed; but there is another that I must mention to you which the Schools have not noticed. This termination occurs in Inflammation taking place in very lax cellular texture, where many red globules are poured out, and the blood is in such quantity as to obstruct the function of an Organ before it putrifies. This occurs in Peripneumony where we generally observe some blood in the Sputa. We would suppose from this that from a suffocation of the Lungs by an obstruction to their free action Death would ensue, and accordingly Peripneumonics die suffocated, and on dissection the Lungs are found heavy and dense enough to sink in water. +

I have now given you an Idea of Inflammation in all it's several parts, and am now therefore in a condition to enquire more particularly into the different Genera and Species of Phlegmasie. These are chiefly to be distinguished from the part affected, by it's structure or functions. I have in some

some measure arranged the several genera with
this view, I have marked,

1. Those affecting Teguments.
2. Those affecting viscera.
3. Those affecting joints, the membranes of muscles
and Ligaments.

I have made two genera, Phlegmone & Ophthalmia.
The peculiar structure and form of this latter part
distinguishes it from Phlegmone. When I say I con-
sider Phlegmone as an Inflammation affecting every
part of the skin except the eyes, & that I had subjoin-
ed Synonyms & Species, this is a mistake in Nosolo-
gists, for the several species I have marked are by
no means all affections of the skin itself, as the
Parulis Mastodynia, the Paronychia & Arthrocae,
none of which are strictly Inflammations affecting
the skin itself. But I own this was a piece of in-
accuracy owing to this that I had not in view the
strict arrangement of the external diseases, and only
considered them as connected with the internal.

But considering Phlegmone only as an Inflamma-
tion of the skin, two species of it have been con-
sidered, viz. Phlegmone & Erysipelas.

I consider Phlegmone as comprehending Erysipe-
las

las, but we want a new word for the genus, or one for the species that is opposed to Erysipelas.

We shall consider the distinctions of Erysipelas and Phlegmone.

Phlegmone I have said is "Pyrexia; partis extemæ rubor, calor, & lentio dolens." Erysipelas, which is our 2^d genus, I have placed under the order Ecanthemata. I say Erysipelas is "Synocha unius vel duorum dierum. In cutis aliquâ parte, sapius in facie, rubor roseus, profou evanescens sed max rediens, diffusus, ambitu inæqualis, in viciniam cutem serpens, simul prius occupatam deserens, tandem in cuticula squamulas, in phlyctenas vel vesiculas abiens."

That Erysipelas is an affection solely confined to the skin I shall not enquire. This is a question in Pathology, but not concerned in the distinction we aim at establishing.

By the rubor roseus I mean pallidus & rubor mixtus. The Antients concluded it proceeded from Bile aggravating the pale appearance. — Diffusus is not a very applicable term; it implies that the Erysipelas is spread considerably, it generally indeed is so, but we mean as having no prominent

minent swelling. *Limbitu inequalis* means not limited or defined by any accurate outline. Tandem in *Aquamuleus parvulus* &c, as a sort of scurf falling off; frequently it ends in Blisters.

Sauvages defines it in Page 5th, 11 Genus of our Syllabus under Erythema. He distinguishes between Erythema & Erysipelas, the former as occurring by fever, the latter without fever.

His definition of the former is "Tumor sine febre superficialis &c", but as this mark does not at first sight appear it is not a characteristic mark. Diffusus I have objected against. — Rubro Rosens is too strong an expression, it almost signifies a bright red, which is far from the case. In its progress Erysipelas often turns to a livid colour, and hence none of our terms are universally applicable. Linnæus considers Erysipelas as an Erythematosa macula rubens, (vid. Linnæus. P. 99.) The term Macula is inadmissible. This term is never employed but to a small speck. — Macula urens is not characteristic as the same burning sensation occurs in Phlegmone. We left out the tumor tumidiuscula in our definition, as it is by no means general. — Desquamatio finienda if every

if every falling off of the Cuticle is to be termed Desquamatio, then it may be admitted.

Mr Vogel, in 277 P. has described his *Erysipelas*, *Inflammatio lata cutis* &c. He has no where defined Inflammation, yet he constantly uses it. —

This definition falls short. How are we to distinguish it from Phlegmone? I have not defined Phlegmone, I have employed it as generic.

Sauvages (P. H. Gen: 15) has defined Phlegmone in the sense I now take it, "Tumor spheroides &c. This last is not very accurate, it approaches to a conical form" *Rubore, Calore, Tensione, Doloris pulsabili insignis*," is only applicable to Phlegmone attended with Suppuration, "*Sponte ad Suppurationem vergens*"; it should be facile, the other is too universal. Linnæus (P. 103) has divided his *Phlogistici* (our *Phlegmasiæ*) into three orders *Membranei*, *Parenchymatici*, and *Musculosi*.

He distinguishes Phlegmone under the title of *Musculosi*; but for what reason I cannot tell, as Phlegmone is by no means confined to muscular parts. Even Rheumatism & Arthritis may be doubted as muscular affections.

He

He has given us Inflammation of the Skin as distinct from Erysipelas; his terms here however are not accurate or characteristic. Sauvages in his 351st Genus gives this definition of Phlegmone is erroneous, "Tumor Inflammatorius, fluctuans cum Rubre Ovi saltem Gallinaeae magnitudine." The Phlegmone may be often less or more; by this he means to distinguish it from Favunculus, instead of Rubor roseus - Rubor Floridus not evanescent but more steady. Instead of dilatabilis of Linnaeus, and instead of ending as a Desquamatio it commonly ends by Suppuration. How do these external marks lead us to the difference of the diseases?

1. From the absence of Tumor it appears that small vessels not being capable of great congestions or effusions are affected in Erysipelas, and have no communication with the cellular substance to give effusions.

2. The vessels affected in Erysipelas are not able to pour out matters fit for formation of Pus, but it is composed of a thin Serum that collects in vesicles. The conclusion from this is that it affects the small vessels on the surface that are not sufficiently

sufficiently dilatable to pour out the proper subject for pus; but this is not strictly true. In pustules of the Small pox, and in the Itch from fine vessels of the skin, yet even these small vessels afford Serum fit for producing Pus. We must then seek for some other cause in the nature of the matter.

In the common Erysipelas the matter is at bottom black, and all Gangrenes consist of an Erysipelatous affection, or it constantly attends them at least.

Though the vessels on the surface may pour out suppurating fluids, yet this seems to be only in consequence of the larger vessels being affected. Thus Blisters raise considerable Evacuations that have no tendency to Suppuration, yet if we have very strong stimulents as Mustard &c, it will give a purulent blister.

Thus a common cause of Erysipelas are burns which produce a thin Serum not readily changed into Pus yet it always exhales an exudation of the purulent kind.

Phlegmon and Erysipelas are easily distinguished from one another. In the former the larger

larger vessels are affected and give larger effusions. The former likewise is circumscribed, the latter extended.

Erysipelas arises from various external Stimuli. In some cases they only raise pustules, sometimes more. The Inflammation from Burning is always of this kind.

Many Phlegmons are capable of a resolution, others from their first rise are determined to Suppuration. When any swelling arises from Stimuli or from extraneous matter introduced all such depend on the deposition of particular matter which must be thrown out of the System; such I say must end in Suppuration, such is the Forunculus or Boil. When the Forunculus is suppurating we see a Nucleus or Core thrown out by the Suppuration surrounding it.

The proper distinction of Forunculus will depend on the Inflammatory tumor, as it is, Phlegmon or Erysipelas. Some writers have the Phlegmon Erysipelatoides, others more properly Erysipelato Phlegmonoides. The Forunculus is of the former kind, it is universally extended with an Erysipelatous Inflammation

Inflammation on the surface, and in this situation it forms the Anthrax.

The *Bubula herdea* is a Species of the *Torunculus*. The with its Synonym *Crusta lactea* would lead me into digressions. I treat of External Diseases only with a view to Internal.

I now proceed to consider The Cure of Inflammation in general.

Unless we are critical in every Word and Particle it is impossible to be accurate in the distinction of diseases.

The Cure of Inflammation is always first to be attempted by Resolution, which is always most safe, as many Suppurations prove fatal. For obtaining the Solution of all Inflammations the following are the Indications to be pursued.

- I. To take off the Excess of Increased Impetus.
- II. To remove the Obstruction or Spasm that supports the disease.

With regard to the first Indication, the propriety of it is evident from Inflammation consisting of increased impetus; but perhaps it may be required I should say in what manner the taking off increased

increased impetus produces Resolution. This I own is difficult to render clear. In the case of Inflammation it is very easy to perceive that the same over distention exciting the Spasm, may continue to support it. I do not think it necessary to explain it, but take it as a fact. If you are not satisfied to take it upon that footing, you must take it upon the following, viz, that there is no means in Physic to take off Inflammation but by diminishing the increased Impetus.

The Remedies for this Indication are the Anti-phlogistic Regimen. I mentioned in fevers how far this Regimen is universal, but in Inflammation it is universal. I mentioned only one exception, viz, the Application of Cold which of itself occasions Phlogistic Diathesis; but this difficulty is obviated by saying we only mean to apply cold to a degree sufficient to obviate the great heat.

We know where force and heat of the system are any how excited we may let it down many degrees without inducing Phlogistic Diathesis. When the heat is great a considerable application of cold will not prove hurtful; but such applications of cold ought to be very general to the System; Topical are

are not so good, and Cold drink I am convinced is pernicious in Inflammation because it is topical.

The second Remedy is Bleeding.

As increased Impetus is to be taken off in Inflammation, Bleeding is universally necessary, and to be applied almost as long as the disease remains; there are however limits to be assigned to it. From the veins we open it might perhaps be impossible to exhaust the System, and when the Bleeding goes to any length the Syncope intervenes and stops the Bleeding.

It is at present but too much the practice to bleed very copiously and frequently in Inflammations in general. I shall here offer some Objections to this practice from Experience.

A person under an Inflammatory fever, on an acceleration of pulse, was constantly bled by his physician to the quantity of four or five pounds, till at last he died under the operation, from a morbid Syncope being induced. — A certain quantity of blood drawn will in time so far affect the tone of our system as to give incurable Dropsies. There is a portion of our fluids, the Gluten & Red Globules, which except in increased impetus never enter

enter the small vessels of the system. By their not entering the small vessels the Tension of the System is kept up, and the greatest part of the fluids is prevented from running so fast thro' the small vessels as they otherwise do.

If a considerable portion then of Red Globules and Gluten is drawn off, the consistence of the fluids must be diminished, and the mass grows fluxile and runs out at every minute vessel. Though the interval should be shorter from the repetition of Venesection, yet it is preferable, as Venesection diminishes the secretions and destroys the Tone of the system.

Bloodletting is very liable to be pushed to excess in Pleurisy and Peripneumony, the patient is debilitated, Respiration made weaker, and he is not able to throw up the effusions that occur in these diseases.

From these considerations nothing is more clear than the indifcretion of Practitioners in Bleeding. It is difficult to ascertain its limits or precise quantity as it varies in age, sex, condition and way of life of the patient. I will however venture to give these general remarks, that
ap

a pound of Blood is always to be considered as a large Bleeding; two pounds in 24 hours a large Evacuation; and three pounds in two days is so much that it may be very hazardous to proceed farther. In particular Constitutions we may go further; but above four pounds of blood in three days is attended with all the dangerous consequences I have before mentioned.

In assigning the measure of Bleeding I have confined it to a certain time. When the time is extended the Case alters; thus a person that will not bear four pounds in two or three days, will bear that quantity in five or six.

With regard to the Hemorrhages that people have sustained, and which has made practitioners think others could bear large Bleeding, there is a fallacy. I do not think near all of it was red globules or gluten in proper proportion, though all issued under a coloured form.

Every successive Evacuation of Blood diminishes it's consistence, that is, more Globules & Gluten pass off at first and less in gradation, so that at the last the different consistence of the Mass will be obvious. — Some Physicians limit Bleeding to
the

the fourth day, because they think that after the fourth day an Inflammation generally turns to Pus. -

From the doctrine of Suppuration it will appear that the time Serum requires to be changed into Pus is considerably various according to the heat, air, matter effused, and nature of absorption allowing more or less of Stagnation. Some diseases may take their turn to it in 24 hours; and, on the other hand, in Peripneumony and Pleurisy, the disease will admit of Resolution even on the 11th, 12th, or 14th days. Wherefore the limiting bleeding to any particular time, because we think Suppuration to be begun, is wrong, as we seldom can tell with certainty when Suppuration is begun. However, if we are certain of Suppuration having taken place, Bleeding is useless as we cannot then obtain a Resolution thereby.

I have now only to add, that the question with regard to the quantity drawn may be avoided in many cases; since we find that topical is so necessary it will supersede general Bleeding. Arteriotomy. Much has been said in favour of this. I consider it only as topical bleeding.

I do not think it is so capable of relaxing the System as opening a Vein, as if you do not open a large vessel you draw off the Blood more slowly than in Bleeding. The Ligature likewise often in Vene Section prevents the sudden appearance of Relaxation. Thus Syncope seldom appears till the Ligature is removed; And in so far as a sudden relaxation of System is of service in Resolving Spasm, we can obtain it more effectually by Bleeding than by Arteriotomy.

The other topical Bleedings are by Cupping and Scarifying, and Leeches.

For want of address in Cupping and Scarifying, Leeches are used generally by Surgeons. - Cupping and Scarifying the Temples is better than the application of Leeches, as these last hang about and we cannot measure the quantity of blood by them taken. Universally when it can be applied Cupping and Scarifying are most proper. - About the Eyes too Leeches will occasion very considerable Ecchymosis.

3. Another Evacuation that may be employed for diminishing the impetus of the Blood is
Purging.

This

This is not without it's use, but is neither so considerable an Evacuation, nor will it supercede Bleeding, whereas Bleeding may supercede this.

The Evacuations by Stool are not to be pushed farther than as a part of Antiphlogistic Regimen except in Phrenitis, Angina, & Ophthalmia; when, as we may look upon purging as a Revulsion, it is more allowable and necessary.

4. Refrigerants.

These may be employed in cases of Inflammation with as much propriety as in Fevers. I refer you to what I said on that subject. — Hence Acids & Nitre may be largely employed in all cases of Inflammation, with this exception that the Acids & Nitre are in no danger of irritating the particular inflamed parts, as in Pulmonic affections, where, by exciting the Cough, they may and do prove hurtful.

How far are Refrigerants proper to be applied in cases of external Inflammation? The Ancients employed Refrigerants and Repellents in the first stage of the Inflammations; but these may destroy the tone of the System and produce Gangrene, hence it is a matter in dispute at present. Theoretically it may be thus discussed, viz, that there are many intermediate

intermediate degrees in Refrigerants between their diminishing the tone and inducing Gangrene. If we could catch the Intermediate points, to diminish without destroying the tone, they may be useful, and this I have seen them successfully employed.

Lastly, we are now, on uncertain principles, come into the use of one of the most powerful Refrigerants, *Saccharum Saturni*.

I have seen it very useful in the cure of some Inflammations. — Undoubtedly in the most part of external Inflammations, except Erysipelas, it may be very frequently employed.

With respect to *Narcotics* or *Opiates*.

These must be employed with Caution in repressing Inflammations. Both from their great degree of power in destroying the tone, and the uncertainty how far they may prove Stimulants I cannot say how their use may be ascertained.

II. To take off the Spasm or the Obstruction of the affected part that was the original Stimulus or chief support of the increased Impetus that occurs.

This I refer to four heads.

1. Warm Bathing.

2. Blisters, or (analogous application) Rubefacientia,

3.

3. Use of Antispasmodics.

4. Use of Emetics.

1. Warm Bathing applied in the shape of
Fomentations,
Bathing. or,
Poultices.

Humidity and warmth combined is a most powerful emollient, ^{well adapted} to relax the vessels and thereby to facilitate their motions. This was before explained when on fevers. Its use is best established in external Inflammations, ^{even in Internal Inflammations} the Ancients depended much on its relaxing the neighbouring parts.

It is rare that Surgeons employ water alone, but with various impregnations; but the effect of water alone, or milk and water have as good effects as any, and from the doubts that may be raised of the several Impregnations, the operations will be quite that of an Emollient.

I have said it is a combination of warmth and moisture and obtained in three ways. If the advantages are expected from Heat, this is best obtained from Fomentations. If more is expected from the moisture warm bathing is safer. And more permanent still is the use of Poultices. Their

Their application in Inflammation is universally proper; except, 1.st when the Inflammation is of an Erysipelatous kind; here humid applications are hurtful; but I reserve this till we treat of that subject.

2. When we can perceive that the Inflammation is supported by the laxity of the vessels of the part rather than by any Stimulus giving increased Impetus, as in some Ophthalmias; here Emollients are hurtful.

3. When the considerable heat by rarifying the blood in the Vessels does more harm by its Stimulus than by its relaxing effects; thus in beginning Pneumatism it has been observed that fomentations by their rarifying and dilating the vessels before the Spasm is disposed to yield, are hurtful. Warm Bathing is likewise there hurtful, and increases the pain.

II. Blistering, or the analogous operation of the Crucifacientia. See Lovers for the operation of these, where I fully discussed this point. They should never be applied when the Inflammation is seated in the skin itself; but, when in the parts beneath the skin, blisters are of service applied

applied as near the part as possible. They are especially useful when the part affected is single, as in the case of Neurisy, Phrenitis, Angina, &c; Where the topical affection is not long confined to this single part but extends all over and shifts, as in the case of Rheumatism where the Phlogistic Diathesis also subsists, here the use of Blisters is a more doubtful application. In Rheumatism they are only proper when the pain is fixed to a particular part and approaches to the chronic kind.

Rubifacientia. These explain why Blisters do not act by evacuation, since these without any Evacuation will often produce the same effects. The blisters produced by these is a more purulent exudation than is obtained by Blistering by Cantharides.

I am persuaded we ought often to employ these Acrid substances which have a long exudation; and this leads me to speak of **Issues and Setons.** These cannot be applied advantageously so as to take off suddenly a recent Inflammation.

It is very common to find use of these at a distance from the part affected; as, suppose a person with a toothach, an Issue in the Arm will often cure

cure it. This however I take to be more Prophe-
-lactic than Curatory.

III. Antispasmodics.

The Theory of these is more embarrassed in In-
-flammation than in fever. They have not been
much employed internally in Inflammation, except
Camphor & Opium which are often used in Rheu-
-matism, for which I shall reserve their Explan-
-ation.

The Antispasmodics I mean here to speak of are
those which are externally used. It has been
the custom to impregnate our Fomentations with
discutient and resolving medicines. — Discutient
is a vague word. — Resolution is altogether on a
false Theory. There is no proof of any sensor to
be restored, neither are the medicines under this
title capable of this effect. If they do good it is by
their Antispasmodic effects, as many of them are
Aromatic, and when applied in the form of Foon-
-tial Oils are manifestly so; but here they cannot
be thought to act so, because they are more
commonly put in Decoctions &c. where the volatile
parts must be dissipated; here they ~~they~~ act as
Emollients. The external use of Camphor however
may

may be advantageous as an Antispasmodic. It is a subtle penetrating medicine and may reach some depth; but from my own observations I am not at all certain of its having any effect in resolving external Phlegmone. — In Arthritic Complaints it has been found serviceable; why it is I cannot well say, perhaps in a manner analogous to the Rubefacientia rather than by acting on the vessels of the part.

IV. Emetics.

The explanation of the Operation of these in Fever will not apply here. The said Spasm depends on Atonia, and Emetics restoring this removed the Spasm and cured the Fever; but we cannot discover any Atonia in Inflammation. I have said most Inflammations depend on a febrile Spasm which supports the Inflammatory state of the part, and hence Emetics by taking off the febrile state may remove the Inflammation.

Concerning the Cause of Pain in Inflammation. Dr Haller has by decisive Experiments shewn the Pleura to be insensible, yet in Inflammation it is undoubtedly ^{not} so. Dr Haller gives a Solution that the pain is great on account of the nerves contiguous

contiguous to the Membrane; but it is difficult to admit such universality of Nerves and yet agree to no pain being felt in his Experiments. I suppose these compact membranes were originally nervous and in their first state were really sensible, but growing more compact as Muscles being formed into Tendons they ^{be-}come insensible to Irritation. This however I confess to be Theory and I do not rest much upon it; A more probable account offers itself.

The Arteries are sensible as formed of Muscular fibres, but not sensible till a proper distension makes them so, and pain in proportion to the excess of this will take place. A ligature made upon the finger creates pain in consequence of Distension to the Arteries: We find also that the pain in Pleurisy &c is always correspondent to the Pulsation of the Arteries and only felt at that time.

I have now considered the Cure of Inflammation so far as it can be attempted by Resolution, but every Inflammation cannot be thus terminated, often proceeding to Suppuration and Gangrene.

These are the Objects of Surgery, which I think proper

proper to omit. Internal Gangrens I consider as desperate. Internal Suppurations in general are very little in our power, only in one case, viz, Phthisis Pulmonalis; where Suppuration of the Lungs most commonly occurs.

Particular Inflammations are divided into,

1. Cutaneous. — to this Ophthalmia belongs.
2. Visceral.
3. Articular.

Ophthalmia.

The character we have given of this may be compared with the other Systems, even the Minutiae of Nosology require a close attention.

Sauvages and Linnæus have put these under a separate class, Dolores. This is a manifest impropriety. To it's character as a Genus Sauvages corresponds ^{me}, he gives "*Dolorem cum dolore, lucis*" ^{it is the same as the inflammation} ^{are} but there are exceptions to this.

Vogel has preserved it among Inflammations, but has put Ophthalmites in one class, the Ophthalmia in another. The Systematics and Practical writers have entered into many distinctions of our present subject. vid. Vogel, &c. — But while they are so intent on these they lose sight of the fundamental distinction.

In the Chirurgical writers you will find much division and subtilty concerning this disease, more than I can follow. I distinguish Ophthalmia according to the difference of it's Seats, which are two

1. Such as affects the Membranes of the Eye: Or
2. The Cilia or Edges of the Eyelids.

I. Then

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1.st Then affecting the Membranes of the Eye.

The Membranes consist of different layers of different nature and structure.

Externally there is the Adnata which is a continuation of the skin extended over the Ball of the Eye. Under this is the Albuginea which consists of two Laves; one the Periosteum of the Eye, the other the Aponeurosis from the Muscles of the Eye. — Considering therefore these as the Seats of Inflammation it will be obvious that our practice must vary as one or other of these Laves is affected.

The Inflammation often may affect the deeper seated parts, as the Coats of the Eye; giving a difference according to it's different situation. — We likewise judge of it by the extent of the pain; for the depth of the Inflammation commonly increases considerably the pain. We know that more of these Laves are affected as the pain of the Eye is more increased by it's motion; that it is extended more to the Retina when the Intolerantia Lucis prevails.

The Inflammation of the Adnata is often with little pain and with considerable redness when the Inflammation

Inflammation is in the Periosteum, the pain is more acute.

We may thus then distinguish the different seats of Inflammation, yet I say these are of the same species and only differ in degrees. — There is another difference as these Inflammations are more or less communicated to the Lachrymal Gland; few Inflammations but what are communicated here, and cause an afflux of Tears, but when the Inflammation is extended to the Gland, then the Secretion is interrupted and the eye is dry without Tears, and this gives a difference — so does it when the Secretion is varied, rendered more or less Acrid.

Where the disease arises from simple irritation applied and consists in simple fluxion this is to be distinguished from the cases where a peculiar Acrimony is produced. Where the seat of the Inflammation is in the Tarsus Palpebrarum the effect of it is to disturb the situation of the beils of the Cilia, in consequence of which the hairs are inflected, and (perhaps by being intangled by the viscosity of the matter) turned and pointed within the eye lids, aggravating much the Inflammation, which is only to be alleviated by plucking out the hairs.

Every

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Every Inflammation may be not only combined but complicated with fever, which may be the original disease. Ophthalmia often depends more on an Intermittent fever conveyed to the part than any original affection of Eye itself.

2. The other distinct Species is that affecting the Edges of the Eye-lids.

The External skin and cuticle are carried along the Cilia to form the Inner surface of the Eye-lids. There are a number of Sebaceous Glands constantly pouring out a fluid to prevent concretions and make them more easy. A difference of this secretion gives a disease. This can certainly like other glands, give a different secretion more or less acrid. They are liable to Inflammation like other cutaneous glands, and may give a purulent exudation, as we see in children, behind the Ears, and in the Crusta Lactea. The Acrimony produced by these destroys the Cuticle and produces an Inflammation readily spreading to the neighbouring parts. This is so acrid as to occasion an erosion applied to any part of the sound skin. This affection of the Eye-lids is often the original disease in the case of the Ophthalmia. The external Tumor and redness of the Eye-lid is

is, I am persuaded, owing to the exudation from the Sebaceous glands, and this may be extended over the bulb of the Eye to the Adnata. These species mutually produce each other, but as the one or the other is the original disease they require a different Treatment.

They are both distinguished by their causes. The Causes, as affecting the membranes, may be various, but it is what I would call a simple fluxion, — merely an increased afflux of blood to the part, which is different when there is an Acrimony deposited, as in Scrophulous, Scorbatic Cases, &c. — Whenever there is this peculiar Acrimony it more often appears in the external Palpebrae. Thus in Scrophula I find the Lilia are most affected, and you lose your labour if you attempt to cure it by remedies applied to the part; but must give remedies adapted to the diseases that caused it, as Sweet waters, Mercury, and Bark, to correct the general habit.

Having now explained my principal distinctions and cases of Ophthalmia, Diagnostics would be superfluous; I shall therefore proceed to the

Cure

Ophthalmia.

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Cure of Ophthalmia, where we consider it as symptomatic, as from an Intermittent, such are only to be remedied by curing the Original disease. We confine ourselves to the Idiopathic Ophthalmia, the source of which is the same with the Cures of Inflammation. For this the Antiphlogistic regimen is necessary, which amounts to the Avoiding Irritation, especially the Irritation of Light. Though many cases of Ophthalmia in which the Inner membranes are not much affected, yet in some degree they are, and there is no instance of Ophthalmia but what is much affected by Light, so much, that, if this circumstance is not attended to, all other remedies are ineffectual. — Very often the Inflammation is confined to one eye, and that only is tejed up, which is improper, and it fails of the effects, for our eyes are so constantly employed that any sensation in the one is readily communicated to the other. The only way to avoid light is, to shut the person in a dark chamber, and this is more effectual than Bleeding and Purgings.

After the Antiphlogistic regimen, the other remedies are to be used, viz. Bleeding. Blood

Blood is generally taken in large quantities from the Arm, but, as no general fever attends the System, Bleeding at the Arm is unnecessary. Blood letting is useful from the quantity evacuated, as it takes off the general Tension, but if this Tension is not general it has little effects on particular parts. There are many persons from whom in ordinary health you may take off twelve ounces of Blood by general bleeding, without any sensible affections; but in Inflammations, as Pleurisy, one ounce, topically, has had surprising effects. This I have often experienced in Hysteria - in a Lady who had been often bled, but we found one ounce of blood topically was as effectual to remove the disease as ten from the System in general. The effects then of general Bleeding are of little consequence in Ophthalmia, Topical bleeding is infinitely preferable, and more adapted to the disease. It will be more effectual however in the first than in the second Species.

Leeches are generally employed, and, as Pringle observes, supersede Arteriotomy; but these again are superseded by Cupping; for after the application of Leeches an Ecchymosis is frequently produced, extremely troublesome. - Upon the edge of the
cheek

* Hence the Aphorism of Hippocrates, that Ophthalmia is frequently cured by Diarrhœa.

cheek bone they are equally as effectual as directly upon the part, and this often obviates the difficulty and is equally successful.

Purging. This I spoke of as a general remedy in Inflammation; but it is chiefly effectual in obtaining a Revulsion; this we can easier make in Oph- *
thalmia than any other disease. I am not so anxious as most practitioners are, that none but lenient purgatives should be employed in this disease, for I find Jalap cum Calom: preferable to Glauber's Salts.

By warm Vapour we can obtain a temporary Ophthalmia; therefore it is to be presumed that Ophthalmia may occur mostly in consequence of the laxity of the vessels; hence the ^{use of} application of Astringents. Doubts may arise as to the application of such Sedatives in Inflammation; but in Ophthalmia there is no such Erysipelatous Inflammation, nor such remarkable tension as would render it pernicious.

Where the Inflammation affects only the Adnata, by Astringents they say you determine the Inflammation to the interior membranes, but I conceive the Astringents are hardly so powerful.

The use of Astringents in Ophthalmias has been prevalent

prevalent, they explained their *Modus operandi* on the false doctrine of Concoction of Matter. It is said they weaken too much the tone of the part; whether a weakening of the tone by refrigerants may expose the disease to a more frequent recurrence I am uncertain, but the Aversion to them seems to be owing to a false Theory.

Where the Inflammation is only in the Adnata, & you repress the Inflammation by Astringents, it is liable to proceed to the interior Membranes. Mr. Plater says a superficial Ophthalmia was turned into Phlegmone Oculi merely by the application of Cold water. But this is more dangerous than Astringents, as Cold aggravates Phlogistic Diathesis. Cold Air is beneficial to persons in Ophthalmia and often proves a remedy; but this is only salutary in a due degree, in a greater extreme it is pernicious. Cold and hot applications, as Poultices &c. are hurtful in consequence of their stimulating from the heat, ^{It even from the life being short & covered.}

The Astringents and Refrigerants employed are preparations of Zinc and Lead. The first Medicine you know only operates in its Saline state, in which it is active. Calomel and Tutty have therefore no effect; the only exception is White Vitriol

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Vitriol, but this is less potent than the Lead. In the form of Collyrium they however are unactive, and the most useful is the Saccharum Saturni.

The preparations of Copper are used. They are Astringent Stimulants and are used to deterge foul Ulcers.

There is not a more useful detergent in this case, than Mercury. The Calomel and red precipitate have been employed; but the common Mercurial Ointment, prepared without Turpentine, applied within the Adnata, corrects erosions of the Lacræal Glands. It has been thought pernicious to apply unctuous applications to the eye; but we know a kind of Gluten gathers and adheres to the eyes, often glewing them together; and here I find this is either remedied when begun, or prevented by an application over night of Mercurial with the addition of a little Acunge.

Emollients are also used. In all cases where the Inflammation is confined to the Adnata, warm water & aggravates the disease. A poultice too without Astringents is apt to increase the Inflammation; but, where the disease is on the external Eye lid and a swelling and much Tension comes on, Emollient

Emollient applications are serviceable to prevent the eyes drying too much - Hence the efficacy of a rotten apple or of a roasted Apple.

Of the Inflammations of the Internal Viscera. The Systematics have distinguished these into such as affect the firm membranes, called Membranacea, and such as affect the cellular texture, or the Parenchyma of the Viscents. It must be difficult however to limit the Membranacea and Parenchymatosa, and in reality they often confound them together. The Synanche they consider as Parenchyma, but it is as much a Membranacea as the Gastritis &c. - The Hepatitis is partly both, but neither of the Authors (Savages and Senneus) make but one kind. In most cases we cannot distinguish the two, as the Phrenitis as Membranaceous, or the Cephalitis as Parenchymatous, not knowing them from external marks.

Inflammation is always Membranaceous. Another distinction has been into Phlegmonous and Erysipelatous; it is a doubt to me whether this is founded in fact. Our notion of Erysipelas is, that it is an affection of the vessels immediately under the Cuticle. There is nothing analogous to

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to the cuticle on the surface of internal viscera,
and the exudations there are concretions on the
surface; hence no room for the distinctions of such;
but in the Mouth and Fauces where the Epithelion
is continued there certainly have occurred Erysipe-
latus affections.

Phrenitis

Phrenitis.

Under this I comprehend the Cephalitis of Sauvages, and Sphacelismus of Linnaeus. Though we find the Inflammation is confined to the Meninges, upon dissection, yet on many occasions it affects the cortical part of the Brain; but we have no means to distinguish the two with any accuracy. I do not understand Linnaeus's characters; Sauvages's is more simple, to him I have added the Delirium ferax and Typhomania. Vogel has made but one Genus of Inflammation, under the Phrenismus, and I agree with him that the symptoms we employ as characters are not accurate; they do not always imply an Inflammatory state. We are to treat of the Phrenitis vera Idiopathica. This is a very rare occurrence. If I have met with it, it was but once in my life - where the symptoms of the face, the suffusion of the eyes, the Delirium ferax are coeval with the fever, then the disease is a true Phlegmasia independent of fever, and arising from topical affection of the Brain - Writers have confounded the two species the symptomatic and Idiopathic.

Cure.

21. November

* 13. February 1770.

Cure.

Immediate and large bleedings are chiefly to be depended upon, and likewise topical bleedings, such as opening the Jugular Veins, and Arteriotomy might be of service; but it is more inconvenient to stop the Blood in Phrenitis than in other people, Sir John Pringle says Leeches will do as well. But what is still better is Cupping and Scarifying the Temples. The practice of the Egyptians in Scarifying the Nose is a precarious practice.

Blistering, as in all other Inflammations, are of service. The older practitioners applied them to the lower extremities, but we now know that the nearer to the part the better; wherefore applying them to the head is much preferable.

Purging. Here this can operate considerably as a revulsion. - Antiphlogistic Regimen must be employed in its full extent. - Applications of Camphor have been applied to external Inflammations. Its Antispasmodic effects have been employed only in this internal Inflammation of Phrenitis (Vera). Dr Ludwig says you must give it to 4 grains; but you must give more. I have given 15 grains, since last night, to a woman in child bed, & it procured sleep.

Cynanche

Cynanche.

The term Angina has been, by Boerhaave, extended to many different affections of the fauces. I have avoided it, though the most proper Latin name, and use the term of Sauvages and Linnaeus.

I am only to treat of the Inflammatory Angina, which is of two kinds

1. Ideopathic.

2. Sympathic or Isanthematica.

The Ideopathic Angina, where the primary affection is confined to the fauces, is of two kinds,

1st Phlegmonic; and, 2^d Erysipelatous. — Phlegmonic frequently ends in Suppuration, the Erysipelatous frequently in Gangrene. The Phlegmonic depends on general causes of Afflux to the fauces, the Erysipelatous is an affection of the same part but depends on a specific matter some how or other determined to these parts. The Ideopathic or Phlegmonic differs in degree in the extent of the Inflammation. — Sometimes the tonsils only are affected, at other times it is extended to the Larynx and Pharynx; at other times extended to the Muscles. These are only different in degree, & do not give different Species.

I am to treat of the Phlegmonic Cynanche, or, what Sauvages calls the Cynanche Tonsillaris. The others are only varieties.

This affection of the Tonsils is really a generic character, and intended to comprehend both Species, hence I have put febris acuta Typhodes. I might have added plerumque Tonsillarum Tumor to the Phlegmonic. — It sometimes affects both Tonsils at once, but most commonly only one; where it yields to a Resolution it passes from one tonsil to another and easily admits of a Cure.

It is thought to give a difference of disease when it is extended to the Larynx and Pharynx, and Physicians have made a distinction as it affects the Mucous Membrane of these or the subjacent Muscular parts. There is somewhat in the Theory of this disease that relates to Inflammation in general. The Cynanche Tonsillaris is generally owing to Cold.

The operation of Cold can have this effect when applied to the Mouth and fauces, and cold and moisture applied about the neck and head, which is a very frequent cause. It is therefore evident that

1. There is here an afflux of a greater quantity of fluids

fluids to the Mucous membrane, and hence that the disease is excited by this afflux.

2. If a person has been used to this afflux then Cold any how applied will have this effect.

The Perspiration when suppressed commonly takes it's course by these Mucous glands; and hence it most frequently happens in that series of Mucous follicles the Tonsils. We may too observe that Inflammation is more apt to arise there because they are in breathing exposed to the application of Cold Air, and thus increased afflux, and the application of Cold causes this disease, agreeable to our general doctrine of Inflammation.

With regard to the progress of the disease, Writers commonly speak of it as attended with much Danger, but I have never seen a person die of the Phlegmone Tonsillarum. It always yields either by Resolution or Suppuration. Unless there be a mixture of the Erysipelatous and Gangrenous kind, Death seldom ensues.

CURE.

In general the Cure is the same as that of Inflammation, being founded on Bleeding, and this according to the degree of fever in the System.
(Topical)

Topical Bleedings likewise are here of great service. A very troublesome Symptom in Angina, is the Swelling, for which a number of acceches applied to the exterior tonsils is the only remedy to be depended upon.

The Ancients depended much upon the opening the Vena ranina just under the Tongue; but this gives only a trifling Evacuation, and the nicely expressed by practitioners with regard to it does not deserve our notice.

Purgings, as making a Pevulsion, may be used with advantage. The Gum Guaiacum is generally esteemed excellent, but it is a heating acrid Medicine. It promotes Perspiration, but I should be far from concluding it a specific in Angina. I have seen it hurtful by its Stimulus.

Rubefacientia. Caustic Volatile alkali with Oil is very penetrating, and is often an useful remedy in Angina by restoring the perspiration to the part. As this is seldom good in the Shops we use the mild, viz, Sp. Corn. Lev., which however is not so good.

Blisters are certainly serviceable, but, on experience of the benefit of Leeches, I reserve the part.

part for these, and confine the Blisters to the back of the neck. Besides these external, topical Internals are to be applied to the mouth and fauces in the form of Gargles; but these Gargles by the exercise they occasion to the Throat are more prejudicial than their detergent qualities are beneficial. Perhaps throwing in the same medicine by a Syringe, as Sir John Pringle observes, would be preferable. Sydenham employed Acid of vitriol with Syrup, and laid it with a probe on the fauces. These applications chiefly consist of Acids which are Refrigerants, but are also Stimulant and promote the Secretion of Mucus.

When there is any tendency to Suppuration, relaxing the Mucous Glands by warm water &c is preferable and more agreeable. The mucus often thickens about the part and becomes viscid, and nothing is so effectual to remove the troublesome sensation as a lotus.

Poultices. The difficulty of applying these and its growing Cold renders it pernicious, I would prefer a Gum or Mellish Plaster.

There is a case of the same Inflammatory Angina, which we call the Croup, by Miller the Angina

Angina Infantum. It is a disease that we have been long in ignorance with regard to, though by no means new or confined to any particular country.

From dissections it appears to be an Inflammatory affection of the Mucous membrane of the Larynx & Pharynx. This, like other internal Inflammations, gives a purulent exudation that thickens on the surface and gives the appearance of a membrane. Many of the Erysipelatous Anginas have this. —

Whether it always depends on Angina or sometimes is connected with Peripneumony is uncertain; or why it particularly affects the Larynx & Pharynx, and children in particular, is also uncertain. From the motion of these parts the disease is aggravated, by the tumor deglutition is impeded and suffocation comes on, and hence the Spasmodic Asthma. — It is very generally accompanied with Catarrhal Symptoms, and the Vox Clangosa depends on the Larynx being affected.

The Cure requires a more plentiful Application of Bleeding, and I should trust much to a topical Bleeding by Leeches applied contiguous to the parts. — We have two Scotch Writers on this subject who

who have viewed the disease in two lights.

Dr Hume views it as purely Inflammatory, and takes not the least notice of spasmodic Asthma.

Dr Millar on the contrary takes little notice of the Inflammatory state of the disease (thinking that to be rather the effect than the cause of the disease) but considers it as Spasmodic; so that he uses Antispasmodic Medicines, as *Afoa folida* &c; and says that Bleeding is of no use. These opinions may be reconciled thus, viz, that the disease is an Inflammatory affection of the upper part of the Larynx, and when it arises to a violent degree it produces the Spasmodic Asthma which is often fatal. The disease is mentioned in the *Acta Curiosorum*, Vol. 2. under the title "*De morbo trisulento Infantum*," by Carolus Augustus De Bergen, as occurring 100 miles from the Sea.

We mentioned a complete Conical Membrane evacuated by the Mouth.

Such Spasmodic affections have been brought on from other affections of the Larynx, as Angina, Peripneumony &c. - What Authors have said of the Catarrhus Suffocativus will apply here in some measure. The constant Symptoms are the Suffocatio & the Vox (langosa).
The

Angina Erysipelatosa.

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The membranous appearance on the Trachea has been much taken notice of. Vide Law's *Pneumatis Dieta*. 247. 248 sections.

The Angina Erysipelatosa, called *Ulcerosa Gangrenosa*, or *Gangrenous sore throat*, has been much of late the subject of attention. I shall pass over it as it has been clearly illustrated by many. (Hutcham & Fothergill).

It is to be considered as contagious, & probably depending on a specific contagion, and hence is not Sporadic. The apprehensions concerning this disease are great and excessive in this country.

The proper Angina Gangrenosa has a Typhus attending it, generally with *Ecanthomata*, *Petechia*, and other symptoms of putridity in the system. It has a redness nearly approaching to the livid, and on the surface of the fauces are sloughy spots which unite, and falling off shew a gangrenous state below. But we must not consider these ulcers as characterizing the Gangrenous Angina; because I have known them in the Phlegmonic Angina where the disease was to be cured by Bleeding.

Many are alarmed at pure white Aphthous
crusts

Angina Erysipelatosa.

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Crusts, which are common in the Phlegmonic Angina, but not in the putrid or gangrenous sore throat.

The Croup, as it sometimes ends in Gangrene, has been mistaken for this disease, and likewise the true Angina Gangrenosa may produce the symptoms of Suffocation, as in the Croup.

It is of some consequence to distinguish these. The Gangrenosa has a livid redness and very little tumor, and the redness extends further to the Pharynx, and the surface is covered with Sloughs; these however are not absolutely distinctive marks, for Phlegmonic Angina have frequently these symptoms, which are to be treated by Bleeding. Some farther distinctions are therefore requisite.

The Gangrenous Angina is generally attended with Typhus or putrid fever, prostration of strength, and Hemorrhages shewing a putrid state of the blood. It is likewise commonly Epidemic, and we are apt to suspect it when it attacks one or two persons. I own however there is a fallacy in this with regard to the distinction between the Gangrenous and Phlegmonic Angina.

Another principal Ambiguity is that in the case of

* Where the Bark cannot be given by the Mouth
it must be given Clysterways.

Angina Erysipelatosa

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of the prevalence of Exanthematic Anginas, Scarlet fever, and Miliary Eruptions, though these rest on the appearance of Roughs, yet the cure is different from the Gangrenous, Bloodletting being here generally administered with success.

In cases where there is tumor and a full pulse, although the sloughy appearances should be strong yet I would not change the treatment, but treat it as the Phlegmonic Angina by Bleeding; nor should I be afraid of the Aphthous Spots which many are so much afraid of.

The Cure consists in a cordial and Antiseptic Regimen, the Bark &^{*}, with some topical and detergent applications to the part.

I now proceed to the other Genera of Phlegmasia. I comprehend Carditis, Pleuritis, & Peripneumony, which I call Pneumonic, they being such diseases as affect Respiration.

The Seat of these diseases, affecting the function of Respiration, or the Pneumonics, are of three kinds.

1. Where it affects the Mucous Membrane of the Bronchiae and Trachea as far as it extends.

(2. Where

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2. Where it affects the Cellular Texture, or the Parenchyma of the Lungs.

3. Where the Pleura is affected, taking this membrane in it's utmost extent, as covering the Thorax, Pericardium, Mediastinum &c.

1. The first forms Catarrhs, which I have arranged among the Profluvia. I doubt however if this is properly, peripneumonic, as affecting the proper texture of the Lungs, for the Membrane of the Trachea and Bronchia is either so very tender in the ultimate Spaciola of the Lungs, or perhaps does not reach them at all, that an Inflammation therein would not give a sensible swelling so as to impede the function of Respiration.

Where it appears peripneumonic or affecting the state of Respiration, it is composed of the two other affections, of the affection of the Membrane and also of the Parenchyma.

2. The 2^d, as affecting the Cellular Texture or Parenchyma of the Lungs, I consider as doubtful. I think Inflammations are all properly to be considered membranous affections; three fourths of Phlegmasiae are such. In cases where the Parenchymatous Inflammation is more probable, as in the Brain, Lungs, and

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and Liver, here the Inflammation is most frequently in the Membranes, or at least the membranous Inflammation is most universally conjoined; and it is highly probable the Inflammation begins there, and that this is the original Seat of the Inflammation. I raise then these doubts against Parenchymatous Inflammation being the primary Inflammation. It only occurs in consequence of being combined with the Membranous. There are purulent effusions in the cellular texture without any combined Inflammation of the Membranes. There, too, are effusions in the brain or substance of the liver; these however may depend on chronic causes, the fluids effused only by their bulk producing Inflammation. It may I think be received that Inflammation is confined to Membranous parts.

There is a subtilty of Boerhaave on this subject; that Peripneumony may be of two kinds as depending on two sets of Arteries, the Bronchial and Pulmonary. But this is mere Speculation, for no writer has marked how such different affections may be distinguished so as to form any difference of Cures.

Some writers think it confined entirely to the Bronchial Artery; but this is uncertain.

3. Affection

3. Affection of the Pleura.

To this Head I refer Inflammations purely Membranous. It may be in that particular part of the Membrane extended over the surface of the Diaphragm, or of the ribs, or of the lungs or Pericardium, or Mediastinum. Authors have referred it to these different Seats, and applied different terms.

To the first they have given the name of Parapneumonia, to the 2^d Pleuritis, to the 3^d Pleuro-peripneumony, to the 4th Pericarditis, to the 5th Mediastinalis. — But we can seldom by external Symptoms ascertain the exact part of the Pleura affected. Whether or not the proper Pleuritis exists or not, yet I am very certain that there are no Symptoms attending it, by which we can distinguish it from Pleuro-peripneumony.

When I said all the affections of Pleura were to be considered together, yet there is a distinction and sufficient foundation to make separate genera, which we judge of by the external Symptoms. —

There are certain Symptoms, as Fever, Dyspnoea, Cough &c, in common to all Pneumonic affections. We must therefore seek for other Symptoms that may distinguish them. — First then with regard to the

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to the Pain. In one case the pain is obtuse and gravitating, in another acute and pungent, and limited to a very narrow spot.

The dull and obtuse pain is accompanied with a greater degree of Dyspnoea, so as to require an erect posture, or to lie on the back, and more or less of expectoration, with bloody Stool, a soft and weak pulse. — This dull pain is sometimes attended forwards to the Sternum, sometimes backwards to the Scapula. — Another Symptom is a considerable anxiety and a difficulty of Respiration which seems to depend more on the Anxiety, than on the pain excited. There is also more or less of suffusions and flushings of the face. From the Effusion in the cellular texture a difficulty to the transmission of the Blood, hence the great anxiety, dyspnoea, and red face will be made, whence the flushing in the face. It will imply too that this is more purely parenchymatous or if Membranous that the acute pain is obliterated by the ready effusion.

The soft pulse more often accompanies this case of peripneumony either because there is less irritation from pain and hence less constriction of the Arterial System, or because less blood transmitted occasions less

less stimulus to the Arteries.

These Symptoms you will observe I have had in view to fix the Genus of Peripneumony & distinct from Pleurisy, viz, "Pyrexia; pectoris sub sterni vel inter scapulas dolor obtusus, anxietas; spirandi difficultas, tussis plerumque humida, saepe cruenta; pulsus aliquando mollis; faciei tumida color purpureus."

Let us now consider the Symptoms combined (combined) with the acute and pungent pain. Here, there is less Anxiety, the Dyspnoea is not so constant, and is only perceived on a very full Inspiration seeming to be more owing thereto than to a difficulty of the transmission of the blood. The Cough is generally dry, and the patient can lie on that side which is not affected. If however he lies on the side affected, the pain and dyspnoea occur. The theory here too favours the distinction, for the Arteries of the Membranes are more compact, do not yield to the dilating power of the Blood, and hence give pain. Hence too there will be less effusion, and hence the Anxiety will be less than in Peripneumony.

These Symptoms then I had in view in order to characterize

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characterize the Pleurisy, viz, "Pyrexia; dolor lateris pungens; inspiratio dolens; decubitus in latus affectum molestus; tussis dolentissima, initio sicca, postea humida, & spe cruenta."

I must now consider a peculiar difficulty, viz, why the circumstances attending the acute & pungent pain are on the sides of the Thorax & not under the Sternum, and when the seat of the affection may be so various? When it was supposed to be an affection of the Pleura lining the ribs, there was no difficulty, but now we know it is ^{affixed} ~~confined~~ to the Membrane of the Lungs, and yet the pain is confined to the side.

The pain is generally in the external part of the Lungs and does not shift its place in Respiration, constantly fixed in Respiration, but any given portion of the Lungs in Respiration glides upwards and downwards. Why does not the pain then follow this Elevation and depression of the Lungs?

The only solution I can find is, that in all Membranous affections of the external membrane of the Lungs it forms an adhesion to the contiguous Pleura; now it is from the adhesion that I derive the acute pain, and it's being affixed to one part, and the cause
of

* Some Doubts may arise also with respect to Carditis, but as it
an affection of so important an Organ we have not chosen
to put it out.

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of its being affected in Inspiration is, that the adhesion is then stretched which gives pain, and as the adhesion is very gradual the Lungs accommodate themselves to the motion of the ribs, and hence may be derived the reason of adhesions being so little painful. This is the only account of the problem; but it disturbs our distinction of Peripneumonia or Pleuritis so far as it's being Parenchymatous or Membranous. Dr Boerhaave, in Paraphrenitis, has spoke of acute pain attending it; but though an adhesion may be formed between the Lungs and Diaphragm, yet the resistance is so small in consequence of this adhesion that there is no pain.

The absence of acute pain does not establish a peripneumonia, it may still be in the membranous parts, and from the absence of such pain we are not to conclude the membranes are free from affection.

From dissections I find the several parts of the Pleura are affected without that acute pain of the side by which all Authors have characterized pleurisy.

In Systematics the Paraphrenitis is considered as a separate Genus,* but I am of a different opinion; the Inflamm

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Inflammation of the Pleura lining the ribs must, as appears from dissections, be a rare occurrence, and likewise an affection of the Diaphragm is hardly marked by any distinct circumstances. —

Whether or not has this last affection a delirium constantly conjoined, whence it is called *Paraphrenitis*? I think it hardly ever comes with delirium *Risus*, *Sardonius* &c. There may be instances, but still Authors say it constantly attends, we can consider it as a Symptom in common to Inflammatory affections of the Breast.

Cure.

This must be in common to the whole, and has very little reference to particular Symptoms. —

The Species of *Peripneumony* of Sauvages are twelve, which may be divided into three sets,

1. Simple.
2. Complicated.
3. Symptomatic.

1. Simple. The *Peripneumonia vera* is the only instance of this. The 11th also, the *Peripneumonia Gastrica*, this is taken from a Symptom. In Morgagni we find an instance of it, where it passed for an affection of the Thorax.

J

Of the 2^d, or Complicated, are the Peripneumonia Catarrhalis. The Catarrh and Peripneumony are to be considered as distinct; they are complicated here, but in a manner the nearest approaching to the Simple case, as requiring the same Treatment. His other complications are Peripneumony with primary fever, 1. Peripneumonia putrida. 2. Ardens. 3. Malignant. 4. Typhodes. 5. Leanthematica. We are to consider the primary disease here, as a fever; a peripneumony may be attended with Intermittent, we immediately attack first of all the Intermittent. — This Cure will not be different from the ordinary method, except in that following the Measles, which is Inflammatory and therefore requires an Antiphlogistic treatment.

The Leanthematica. — There is a case of Leanthematic peripneumony; but whether or not a Peripneumony coming upon the Small pox is to be treated as Inflammatory Peripneumony I am uncertain, and it must be gathered from the history of each particular disease.

3^d The Symptomatic Peripneumony. The four remaining species are either Symptomatic or Unintelligible. — As the Peripneumonia Phthisica and

and the Arthritica, or 10th species, is symptomatic, but gives great difficulty in the Gout. Some have thought the peripneumony here was to be considered as the primary Inflammation. The Hydrophobica or Rachialgica are inaccurate and what I never experienced.

Pleuritis.

I reduce the whole of the species of Sauvages, under Pleurisy to two sets.

1. Where it is simple, the disease being purely Inflammatory without any complication of fever.
2. Where it is complicated and depends on fever or Catarrh. — Of the first kind are several species, viz, the Pleuritis Vera, the Pleuritis Pulmonalis, Pleuritis Dorsalis, but there is no certainty or use in the distinction of these as Genera. Such as likewise the Pleuritis Mediastina, Pleuritis Pericardii; it is more allowable for Sauvages to mark these as species than for Vogel to mark them as Genera. Likewise the Pleuritis Hydrothoracea, which is no more than that many Pleurisies and Peripneumonies end in a Hydrops Pectoris; but this is not sufficient to make a distinct species, no more than the suppuration and Gangrene as being no more

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more than a different stage of the same disease.

The Complicated of Sauvages are, 1st Those conjoined with fever, and, 1st with Intermittent that he calls *Pleuritis Periodica*, but this is, nothing but a fever, and more particularly so as it comes oftener with an Intermittent than continued, you may consider the *Biliosa*, the *Putrida*, *Erysipelatosa* and *Pestilenta*.— 2^d As complicated with Catarrh, as the *Catarrhalis*. The *Hepatica* and *Splenica* are merely diseases resembling *Pleuritis* but are not strictly so.

With regard to his *Convulsiva* I cannot form any Judgement.— The convex surface of the liver has given the same symptoms as the *Pleurisy*, with the same Symptoms as affect the Respiratory Organs.— His *Polonica Miliaris Lactea* &c are doubtful species of diseases. As these diseases are always of some duration they suffer great changes in their progress; these changes we shall now take notice of, with respect to their different modes of termination.—

They are terminated by Resolution, viz, when the functions of the part are restored without a destruction of texture— they generally however have

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have some evacuation accompanying them, which occasions the resolution.

Of these secretions the most general is a quantity of matter thrown up from the Lungs. This matter is called in Latin Sputa, but our English term of expectoration is more proper. This then accompanies Inflammation of the Lungs; but what are the precise states of the matter is not yet explained. It is commonly a secretion of the Bronchial Glands, and of the same nature that accompanies Catarrhs; but whether some is not derived from the exhalent Arteries is a doubt; from the first we are certain it comes, but we have no doubt but that the extremities of the pulmonary artery are constantly exhaling a matter from the Bronchia; but how far this can put on the form of a Mucous Secretion is uncertain.

Hippocrates has given great varieties of these Sputa, on which the moderns have commented; but I have not Theory enough to account for them, nor from these judge of the event of the disease. Hippocrates says all the Sputa that relieve symptoms are to be considered as good, and, however simple the matter is, if it has not this effect it is

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is pernicious.

These Sputa may be considered,

1. As an excretion of the morbid matter—whether in all these a morbid foreign matter is present is uncertain. In Catarrh we have no doubt of it, but as Pneumonic affections arise from mere Cold there is no suspicion of morbid matter.

2. The accretion increased may be considered as a means of relaxing the Spasm of the inflamed vessels; thus the Effusions of a halitus in Rheumatism may produce a Relaxation, and hence the Bronchial excretion may occasion a resolution, but mostly the quantity is not copious enough to occasion this relaxation of Spasm; hence this is not to be considered as a cause but as an effect of the Relaxation of the Spasm, and a Symptom of the Solution of the disease.

However you view it you may see why we consider it as the best Symptom in the disease, as it shows when the Resolution takes place.

Boerhaave has mentioned several other excretions or several other means of Resolution; he says they are sometimes cured by Hemorrhages from the Nose and Hemorrhoidal vessels. These may have

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have the effect, but rarely in this part of the world.

Another, Boerhaave mentions, is, by Urine, if it is turbid and deposits a copious Sediment of a lateritious kind, or rather deposits an uniform Sediment. Such Symptoms do accompany Pneumonics in hot climates, but seldom here. But the changes of Urine are more frequent with us in Phlegmasia than in Fever; the Evacuation of a morbid matter by the Urine is hypothetical, and this Evacuation by Urine is to be considered much more as the effect than the cause of the Resolution.

A. Boerhaave mentions Stools and Bilious ejections from the Pectum — Clegorn takes notice of the ancients observing this Crisis; but, though in a Climate of the same kind with Greece, he observed no such crisis in Pleurisy.

At 5th means by which Inflammation of the Lungs are resolved is by Inflammation & Abscesses in other parts. I shall here supply some things defective in my former Observations.

I observed how a topical affection produced a Phlogistic Diathesis in the System, and we shall explain that the general Diathesis is to be considered

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considered more than the topical affection. The general Diathesis gives a tendency to Inflammation, so that it frequently arises in many different parts. Hence Phlegmasiae are seldom single.

Peripneumony often has only one lobe of the Lungs affected, but it frequently passes on to the others; it often also is accompanied with Phrenitis and various affections of the abdominal viscera.

—The Inflammation extends from Lungs to Pleura Mediastinum Diaphragm &c. This is only from the prevalence of general Diathesis determining the Inflammation to particular parts.

Cleghorn mentions the translation of the Inflammation from the bowels to the surface of the body, and an Erysipelas appeared over the body, & in many settled on the legs and formed an Abscess. From this shifting of the Inflammation he accounts for the various affections.

I think instead of translation of morbid matter it may be explained simply by general Diathesis, and when it affects another part it alienates the Inflammation from the original affection.

Another more considerable excretion, not mentioned by Boerhaave, is by Sweat; whether it is
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to be considered as a cause or an effect of the Resolution I leave you to determine).

This is but rarely observed with us, but, in the Southern climates, the Pneumonic Inflammations are often accompanied by a considerable fever, and such secretions are to be considered as the Crises of the fever attending on Phlegmasia. Attend to the Antients on the complication of fevers with Phlegmasia, and you will find that fever is mostly the original disease, Phlegmasia merely Symptomatic.

Another termination is by Suppuration; the time of this varies according to the state of absorption and the increased impetus of the vessels, hence we cannot say that where a Pneumonic affection does not terminate in 4 or 5 days by resolution that it will terminate by Suppuration, for it may terminate by the former even on the 9th day.

When however 8 or 9 days are passed without accretion, and difficulty of breathing comes on from very considerable effusions, then the disease must be fatal or end in Suppuration. We judge of the beginning of Suppuration when the pain is

is abated but Dyspnoea increased, when the Remissions are more frequent, frequent recurrences of horripilation and a soft pulse. When the Cough still continues and the fever more formally puts on the appearance of S hectic, attended with clearness of the Eye and an expectoration of a purfuraecous matter. When the Suppuration is formed the decubitus is different, the patient can then only lie on the side affected.

Boerhaave supposes a translation of the matter to different parts by Absorption. That it may be absorbed and deposited is certain, but the occurrence is rare. Boerhaave makes use of it to explain the various Abscesses; but these translations are so early in the disease that his expression of *Purulentum jam facta* cannot be just. Van Swieten speaks of it as a translation of morbid matter but not as *materia jam purulenta facta*.

These diseases often terminate in Gangrene which may be known by the violence of the Symptoms expressing the nature of the effusion; as from the Septic nature of the prevailing Epidemic, from sudden debility appearing in the pulse and whole System, a weakness, mild delirium,

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cold sweats, cold extremities &c. such termination of Gangrene does happen in Pneumonic affections, and when it occurs it is certainly fatal; but it is by no means so often the immediate cause of Death as has been imagined. It is combined with another circumstance, viz, the effusion of Globules into the cellular texture not fit to be reabsorbed, and of a tendency to become putrid. This when considerable must produce such an obstruction in the Lungs as to produce Death. It is known by the difficulty of breathing; the obstruction and accumulation of blood in the right Ventricle occasions the ascent of the blood to the head, hence the suffusions of the face.

From the nature of the effusion, and especially in putrid cases, there may be a tendency to Gangrene, but without this the mere effusion may be sufficient to cause Death. This is plain from Dissection, where the Lungs resemble more the liver, and are red over their whole surface, the Air vessels being also filled. —

A 5th termination is by Schirrus. This however I have no Theory to explain, nor experience to communicate

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communicate the necessary facts. — In consequence of considerable effusion of blood into the cellular texture I mentioned that Respiration was affected and suffocation frequently ensued. Another however is occasioned by an effusion from the external surface of the Lungs into the Cavity of the Thorax. Sauvages's Species Hydrothoracica arose from these effusions having been found in the Thorax upon dissection.

These Effusions may aid in promoting the Resolution of the Peripneumony, and on the other hand may sometimes be to such a degree as to contribute to Death.

Sometimes too a Hydrops pectoris is the termination of Peripneumonies, of which many cases occur, chiefly arising from large abstractions of Blood, in which the lymph and globules being drawn off, too great an effusion is made by the exhalants. It does not often produce universal Dropsy, but it has a particular tendency here, viz, as the exhalants are more open in consequence of the Inflammation on the surface of the Lungs.

There are two diseases commonly treated under these affections, viz, Pleuritis Siccis, & Peripneumonia Notha.

Pleuritis

Pleuritis Spuria.

This is a Rheumatic affection of the muscles about the Thorax, and hence to be considered as a case of Rheumatism, and therefore to be treated of else where. Sometimes there is a doubt with regard to this disease. It is distinguished from Pleurisy even when the pain of the side is without fever and cough; but genuine Pleurisy may be accompanied with Catarrh, and this with affections of the muscles, particularly the *Serratus major anticus*; this may be accompanied too with some degree of fever. It is painful externally to the touch, which genuine Pleurisy never is; but it never is painful but when the muscles are in motion.

Peripneumonia Notha.

This is a disease little noticed in old Systematics. It is first mentioned in Sydenham and from him by Boerhaave. At length a very bold critic appears, viz, Mr Lieustaud, who tells us that Sydenham & Boerhaave had described different diseases, and had been merely supposititious. But when he informs us they gave nothing but hypotheses & rejects their disease, yet he does not substitute any thing of his

his own in it's room. It is a disease I have frequently spoken of as Catarrhus Senilis, and I would speak of it under this title of Catarrh. Catarrh is an attendant upon old age, accordingly when Catarrhs are Epidemic they are chiefly fatal to old people, because a considerable Serous Effusion is here produced, as seems to be the cause of Suffocation and Death. It has, however, sometimes more or less of Peripneumonic affections joined with it, viz, more or less of the effusion of red globules, which greatly depends upon the laxity of the vessels.

From this it will be easy to know the Symptoms of the Cure, and why Bleeding is of little or no service. Early Vomiting and the use of Blisters are most effectual for the cure of this Disease.

We now proceed to the Cure of these Inflammatory affections, which is

- I. To diminish the increased impetus of the Blood.
- II. To relieve the Spasm of the part affected.
- I. For the first Bleeding is more especially necessary, and to the degree that the patient's strength will bear. The first Bleeding must be large and copious, and ought especially to be employed in the beginning of the disease. The Bleeding

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ing may be repeated, only in smaller quantities and at longer intervals. Physicians have thought of limiting Bleeding; but I would recommend the perusal of Clegghorn on this subject of Bloodletting, who is excellent. The Pleurisy of Menorca, he says, are liable to have remissions on the fourth, fifth, or sixth day, and afterwards it is common for the disease to recur with its former violence.

It is alledged that excessive Bleedings may either suppress the Secretion of Mucus that is of Service to the Cure, or so much as diminish the strength of the patient so that he may not be strong enough to expectorate that Mucus; but this has no weight with me, for Bleeding must be to a very great excess indeed before it has this effect. On the contrary I imagine the dry Cough shewing the Interruption of Expectoration is owing to Spasm of the extreme vessels, and for this purpose Bleeding is necessary to take off the Spasm & bring on Expectoration; and I believe that Bleeding contributes to forward Expectoration fifty times for one that it suppresses it.

With regard to the Debility the Bleeding may produce so as to prevent the patient spitting, I will

will say that it does not depend on the Debility produced by the Bleeding, but on debility that is the necessary consequence of the effusion.

Where there is any doubt about our general Bleedings, topical Bleedings may be substituted, here however they are inapplicable to the part affected, but there is a case in which they are necessary, viz, where the pain is extended to the external parts and shift their place. Scarifying, Cupping, &c are the only remedies, and that with a view more to prevent these pains than for the disease itself; and Clegborn informs us that when a sufficient quantity was drawn off, he never missoed to palliate or cure.

Purging. This has been much exclaimed against in Peripneumony; but it is found to be of Service in keeping the belly open.

II. To take off the Spasm from the part affected. Blisters are to be employed for removing the Spasm, and the nearer to the part affected the better, as to the back, Sternum, Sides, &c. — Emollientomentations and Poultices have been proposed, but are of little use.

The Rubefacientia have been employed, as mustard seeds &c, and may be of use. Emetics

Emetics may be certainly useful with regard to the fever, and hence diminish the determination to the affected part, but are of no use for the Spasm. The French Physicians after a second or third Bleeding generally employ Vomiting. I have seen this practice and have found persons in this disease bear Vomiting better than one would expect; but they ought only to be employed at the end of the disease, and then as Expectorants.

Another Indication is to promote the Expectoration, which may be done two ways;

1st By Stimuli capable of Stimulating the excretory or secretory vessels of the mucous Glands, as by acrid Pectorals. For this, Crofs, Pulegium, Hyssop, &c, have been employed; but I never saw any use from them, and they are dangerous from the Inflammatory Stimulus they may communicate. I shall neglect all the ~~above~~, and confine myself to Squills, Gum Ammoniac, and Volatile Alkali.

Squills. I have always found it very difficult to convey this Medicine to the Mucous Glands of the Bronchia, in such a dose, as is necessary, without stimulating the Stomach and Guts. And I say if it is at any times useful it is by affecting the
Stomach

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Stomach so as to produce Vomiting.

Gum Ammoniac. I never saw the good effects *Materia Medica* writers mention of this; but have found great inconveniencies from it.

Volatile Alkali. This I believe is the most effectual stimulus of the three, yet it is not admissible till the fever is abated and that the promoting the Expectoration is our sole view.

2^d By relaxing the secretories of these glands by the external application of Emollients; which is obtained by the Introduction of warm steams into the Trachea.

I had occasion to say enough upon this subject when treating of Angina. I have no faith in any impregnations that have been attempted. Even Wine-gar will not exhale any sensible parts so as to be of particular service.

Another way in which relaxation is produced is by moistening the fauces with a warm emollient fluid, as Decoct: Pectoral. This affects the mucous glands surrounding the Glottis, and the relaxation they induce is a considerable assistance to expectoration.

Another means is by taking off frequent Cough—
Cough

Pneumonic Affections

Cough by constantly emulging the mucous follicles does not allow the Mucus to stagnate and acquire a thicker consistence and mild quality. The Cough may arise from different causes;

1. From a sense of difficulty in the Lungs.
2. If the Mucus is poured into the follicles, as soon as secreted, it is Acid, and we correct this Acrimony by changing it and obviating its effects. For this purpose we throw in such mucilaginous medicines in the mass of blood as may be capable of inviscating it. It operates on the Mucous Membrane on the upper part of the Larynx whose sensibility we take off by the application of Oil &c.

It was supposed by the Venetians that the efficacy of Mucilaginous Medicines in Catarrh was owing to their really entering the Trachea and covering its surface; but the following simple explanation may account for their action.

The Mucous Membrane on the top of the Larynx is endued with particular Sensibility, in consequence of which, in the Larynx, we find the irritation chiefly there; it is more sensible than any part of the Trachea and Bronchia. We are every day exposed to such Acrimony in Health; but the parts are then

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then defended by a quantity of Mucus; but, if the quantity of Mucus is diminished, the Acrimony in contact with the Membrane excites the Cough, which can only be prevented by supplying an artificial Mucilage, hence the benefit of Oils &c.

Solids perhaps are better for this purpose than fluids, and Gum Arabic is perhaps the best Lozenge. But of all others the Comfret Cakes are next to be preferred. Acids may be employed which stimulate the Mucous follicles and promote the Expectoration of Phlegm; Upon this account Lincluses with the addition of a little Acid are employed; it is what the Old women call cutting the Phlegm.

We likewise take off the Sensibility of these Membranes by the use of Opium, one of the most effectual means of quieting a Cough. The use however of these has been by no means accurately discussed. It is agreed I think that Tralles's opposition to Opium, that it increases Inflammation, is certain, & hence pernicious in such cases.

Stork, De Haen & employ Opium with great freedom in Pneumonic affections. I am uncertain of its success, and I suspect a fallacy, viz, that the term Pneumonic they have applied to Catarrhs &c, where the use of Opium is highly good.

D.S.

Pneumonic Affections

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Dr Cleghorn says, "Sometimes opium is of use in quieting the cough, yet it is not safe till the height of the disease is over."

Sir John Pringle, in P. 149, says, that "Sometimes opiates may be given, but it ought to be with caution. When the fever is present, the pulse hard, & breathing difficult, opiates do harm; but when the fever is gone and sleep is only prevented by a collection of Mucus in the lungs, then opium is of use in promoting Expectoration."

The most natural solution of these diseases I said was by Expectoration. It often happens towards the end of the disease that this secretion is too viscid, and is coughed up with considerable difficulty. We relieve the follicles by employing Pectorals, and give a more fluid secretion. For this purpose Vol. Alk. is excellent, but Vomiting is the best and most powerful Expectorant we are acquainted with.

For the cure of Pneumonic affections by Suppuration and Gangrene I leave you to the Writers on the subject. I shall speak of the former in the Phthisis Pulmonalis. The latter is generally fatal.

J

I now proceed to consider the Abdominal Phlegmasiæ, which are much more rare; but, as they do occur, they must be considered.

Peritonitis.

This I have marked as my first Genus. It is little noticed in any practical System. It is a very rare occurrence, and from this being so rare I have drawn an Argument for the true Pleurisy so rarely occurring.

The causes determining Inflammation to these purely Membranous parts, not connected with a Viscus, are not so easily perceived, and it is probable that it is only in consequence of a Connection between some Viscus and these Membranes that an Inflammation comes on.

Vogel has four Genera; he has Omentitis, Mesenteritis, Myocœlitis, and Peritonitis; but these are all affections of one Membrane. His Myocœlitis, however, as an affection of the Abdominal Muscles, may be more difficult; but there is no Muscular Inflammation, only Membranous, and the pain in the

the Muscles arises from Inflammation of the Membranes. From many dissections these separate Inflammations occur, but hardly ever alone, always connected with some of the Viscera, hence not an Idiopathic or primary affection. I think therefore it admits of no other character than what I have given it.

The character I have given it is, "Pyrexia; dolor abdominis corpore erecto auctus absque propriis aliarum phlegmarum abdominalium signis." — Lennec is so far of my opinion of it's not being an Idiopathic disease that he has left it out entirely. — Sauvages, out of Vogel's four, has only mentioned one, viz, Epiploitis; his character of this is "Dolor circa Hypogastrium, & umbilicum juxta epiploei extensionem." — Dr Fordyce, in his Practice of Physic, among Inflammations, mentions the Inflammation of the cellular texture under the Ploas muscle. I am very certain that the Inflammation does occur, though I have not met with it. He himself, however, does not tempt us to see much for it, as he tells us it is to be treated like an Inflammation or Suppuration of the Liver.

I likewise make the same conclusion with regard

Peritonitis

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regard to these Abdominal Inflammations, that,
when they are known, they are to be treated in
the same manner as Inflammation.

Gastritis

Gastritis.

With regard to that, some curious distinctions might occur, as it affects the different coats of which the stomach is composed; it is often only an inflammation of the internal villous coat, as the external (cuticle in Erysipelas, so that this may be first of an Erysipelatous kind. But it does not affect in this manner the Tunica Nervosa or Vasculosa. And there is also an inflammation of the external Membrane or Peritoneum.

We have not however so many dissections with causes or symptoms that can make so many distinctions. I must proceed to distinguish this disease according as it differs in its causes.

1. As it depends on various acrid stimuli and inflammatory matters introduced into the Stomach, or there generated.

2. Where, independent of such acrid applications, there are internal causes that produce inflammation of the stomach, here Idiopathic.

3. Inflammations of the Stomach complicated with and dependent on fever.

We are chiefly to consider the second, where the disease

disease is Idiopathic.

The first kind is to be cured either by throwing out the Acrimony by Vomits, by correcting it chemically, or by deluents; or, lastly, by throwing in demulcents so as to shield the Acrimony and obviate its Inflammatory effects.

With regard to the second, or Idiopathic Inflammation, arising from internal causes; whether such truly occurs is difficult to say. In consequence of Phlogistic Diathesis subsisting in the system it may strike on different parts and on the stomach amongst these. It is of consequence to determine whether it is Idiopathic, or a Symptom of putrid fever; as the cure will be very different in each. Thus Boerhaave says it is cured by copious Bleeding, while Hoffman condemns it; but Boerhaave had in view the pure Idiopathic, Hoffman a putrid malignant Intermittent.

In examining on what the distinction of these diseases turn, we must say why I put in Pyrexia Typhodes as a part of the Character. Linnaeus & Vogel, following Hoffman, have made the Typhodes to be the fever. It is followed by a greater prostration of strength and pulse, hence I put

put in Typhodes.

Cure.

When this disease is Idiopathic, or when the fever complicated with it is not Malignant, Bleeding, and large ones, are to be admitted; and the small pulse is not always a reason for omitting Bleeding, as it often rises and becomes stronger upon performing the operation.

With regard to the Cure further, we are excluded from all Medicines by the Mouth, even the most mild; but, in order to a proper Evacuation of the stomach, nothing is more necessary than keeping the Belly open; which however can only be done but by Glysters. Diluents are here of use, therefore Glysters of warm water should be injected. Tomentations and Blisters to the Epigastric Region are likewise of great use.

Of the two kinds of this disease, Idiopathic and Symptomatic, the last is most common, being Symptomatic of some fever. If there should be any doubt which of these two kinds the disease is, Blisters may be employed without danger, as they are of service to both kinds.

Enteritis

Enteritis.

This disease is, like the former, either Idiopathic or Symptomatic. It may be a Symptom of fever, Dysentery, or Cholera.—

Vogel's character of this disease is "Intestini inflammatio; febris astodes, phricodes, cruciatus ventris intolerabilis, flatuum & stertoris retentio, aut dysenteria." There is here an ambiguity, [There is here an ambiguity] by his adding "stercoris retentio aut dysenteria."

Linnaeus's character of this disease is "Febris cum evacuatione abdominis, colica atroci, tensiva, ca-
lente." He likewise therefore would comprehend the Dysentery.

Sauvages's character of this disease is "Dolor ~~circum~~
circa umbilicum vehemens, cum meteorismo,
pyrexia acuta, ileo, vel dysenteria."

For a long time it was thought that Dysentery depended upon an Inflammatory affection of the Intestines; but we now know, that though Inflammation may often accompany Dysentery, yet it never makes an essential part of its character or of the disease, requiring a very different treatment.

Yours

You therefore see upon what foundation it is that I have changed the character so much from other Systematics. My character of it is "Pyrexia typhodes; dolor abdominis pungens, ^{tendens,} circa umbilicum torquens; vomitus; alvus pertinaciter adstricta."

When the pain is fixed and pungent, it gives no doubt with respect to the part affected and the disease; but this is often only a Dolor torquens circa umbilicum; there is no foundation for supposing this dolor torquens is only from an Inflammation of the Small guts, as Van Swieten observes, for it may be propagated along contiguous membranes, and only felt where the vibrations are stopped, so it may be propagated from any part of the Intestines and stopped about the navel. It is the Dolor torquens joined to acute fever that properly characterizes Enteritis.

Idiopathic Enteritis. By much the most common and frequently observed is that which arises from cholic, or from any cause that any how shuts up the passage of the Intestines, whether from Calculous concretions, Spasm, hardened feces, or which produce constriction, upon which Inflammation ensues. I own that Inflammations often supervene

supervene upon Cholick or Spasmodic constrictions, yet I am certain there are violent Cholicks without Inflammation, nay an inverted motion of the Intestines without Inflammation.

Cure.

In so far as this disease does not depend upon fever, it is to be cured, as the Gastritis, by large & free bleedings, warm bathing and Glysters.

Warm bathing is universally employed either in the form of Semicupium or fomentation to the Abdomen Cold, applied to the mouth, sometimes takes off the Spasm of the Intestines, at other times aggravates it.

Glysters. These are extremely necessary as the disease so often depends upon Constriction and Obstruction. The disease is always attended with an obstruction; here we must always employ lenient laxatives, as the Neutral Salts, which may likewise act by their Refrigerant and Sedative qualities.

Oleum Ricini, or Castor Oil, is a most excellent medicine, purging without any Stimulus. Two days ago I found an obstinate Constipation, which had, with great pain, subsisted for six weeks, had been eased a little by laxatives and opiates,
End

and appeared to arise from an obstruction by hardened feces. The A. Piccini soon operated and brought away two hardened scybala of the size of a hen's egg and hard as stones.

As the Enteritis so commonly supervenes upon cholera, it is a question when we must employ opiates and when bleeding. This will depend upon comparing the symptoms of Spasmodic cholera with those of Inflammation.

Hepatitis.

I find it very difficult to form a character that will apply to all the several cases of this disease. I have, however, at last, with great difficulty, found one, but you must pay attention to the whole of it. It is "Pyrexia; hypochondrii dextri tensio & dolor, sepe pungens pleuritici instar, saepius obtusus; dolor ad claviculam et summum humeri dextri; decubitus in sinistram latus difficilis; dyspnoea; tussis sicca; vomitus; singultus."

A pain of the liver is for the most part said to be obtuse; but we shall notice this hereafter. The "Dolor ad claviculam & summum humeri dextri" is said to be pathognomonic; but, observe, that the absence of this Symptom is by no means a mark that the disease is not present; I will even go farther and say that when this Symptom is present, it is not always decisive with regard to the presence of this disease; because this Symptom often occurs in Pneumonic affections. When it is on the convex part of the Liver, it attaches itself to the Diaphragm, and this pulls down the Mediastinum; but this may be in the concave part of the Liver, and so no pain

of

of the shoulder occur. In the character of this disease none of the symptoms are certain and decisive. As to "Dyspnoea, Singultus" &c, these do not characterize but only qualify different cases of Hepatitis. From the whole then you will observe, that, if our character of this disease is not perfect, the other systems are much less so. —

Many, as Vogel, put as a character of this disease, a Jaundice colour, "icterus," but Jaundice can never be produced except the Ductus communis be compressed. Another part of Vogel's character is "interdum vomitus bilis," but in this he may be excused as he follows Celsus. If the vomiting of Bile occurs, it is not in consequence of Bile being secreted; but is a Symptoma Symptomatum, i. e. the Bile occurs merely in consequence of very violent vomiting.

With regard to the Theory of this disease, I reject entirely the Opinion of Boerhaave that it may be an Inflammatory affection of the Vena Portarum or Arteria Hepatica. There is nothing of an Arterial nature, nothing of a muscular coat in the Vena Portarum. This cannot have the impetus of the Blood increased as in an Arterial Affection.

Another distinction is the dividing the Inflammations

Hepatitis

11A.

mations into Erysipelatous and Phlegmonic. I cannot admit it, for reasons before assigned. — The division into Membranaceous and Parenchymatous has here more distinction than elsewhere, yet the deeper seated Parenchymatous affections of the liver depend upon chronic congestions of the liver, in which, after some time, on the stagnation of the fluid, an Inflammation ensues. — The Parenchymatous is not a primary disease.

Nothing is more common than for Hepatitis to depend and occur from Intermittent fever, as in the East and West Indies.

Cure.

This is the same as for all the Abdominal Phlegmasia, viz. Bathing, Blistering, moderate purging, and Bleeding. As Inflammatory congestions of the liver are the consequence of Intermittents, free and plentiful Mercurials are found to be of the greatest service. For this practice I refer you to those gentlemen who have experienced it in the East Indies. — Nosologists have almost everywhere confounded Symptomatic Phlegmasia with Idiopathic, and this has bred great confusion in their Systems.

Splenitis

Splenitis.

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Splenitis.

This is a very rare occurrence, only two cases, in the Records of Physic, and these taken from Forelius. I shall therefore change the character. Linnaeus has given in his character the "Tartarophya", but this is merely Theoretical.

The Ancients, thinking the Spleen was the Seat of Mtrabilis which in a Quartan is often thrown up, thought that the fever must have a Quartan movement. - We have indeed a Tartarophya Splenetica, but this is in consequence of Congestions arising from the fever. This may serve as an example how ready Physicians are to collect their facts from Theory.

The Cure of this disease is the same as other Inflammatory diseases.

Nephritis

Nephritis.

This disease most commonly arises from calculi; it does however sometimes arise without calculi, and the distinction of the two cases is difficult. We may suspect a Nephritis calculosa when it happens in a person from a hereditary taint, and more strongly, if in a temperament especially liable to form calculi. This temperament is the same as belongs to the Gouty, and we shall suspect the Nephritis to be calculous when the Gout has in some part of life preceded. When also the Nephritis has been preceded by various disorders of the Stomach, the Stones will increase pretty largely in the kidneys before the patient is affected, and it is difficult to account for the absence of pain when there is a calculus in the kidneys. I have known affections of the Stomach precede proper calculous symptoms for a year, and frequently for some weeks.

For the most part, however, in the genuine Nephritis, the Pain and Inflammation come on together; but in the calculus the pain exists many days before any Inflammatory affection supervenes.

In the Nephritis the Inflammatory affection is constant

Nephritis

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constant, but the calculus admits of very considerable intermissions.

It is necessary these disorders should be distinguished, because they require different management. Bleeding however is essential in both, But Opium, which in the one is serviceable, is pernicious in the other. They both require that the belly should be soluble, and this not upon the principle of common phlogmasia but from the connection of the kidneys with the colon where even flatus would aggravate the Inflammation of the Kidney. Sydenham always used laxatives in this disease.

Cystitis

Cystitis.

This Inflammation of the Bladder requires, Blisters, Purgings, Glysters &c, and Oily injections into the Urethra.

Hysteritis.

When the marks in our character are truly present we shall have little difficulty to distinguish the disorder; but often all these are not present, often only a slight Phlogosis of the uterus giving little pain.

I have here perhaps omitted a symptom, the "dolor lumbis inguinum"; this however is no more than the Inflammation of the Uterus communicated to the ligaments. — Linnæus has omitted this and added several others, as "Spasmus Sardiæ"; these may occur, but I apprehend seldom. The greatest difficulty is to discern it in Child bed women. — Child bed fevers are purely of the Nervous kind, without Inflammation, and from the Evacuation preceding they do not admit of Bleeding; but when the Uterus is inflamed they require Bleeding. The Inflammatory state is to be suspected by some

some degree of tension in the region of the uterus,
a hard pulse, and by the *os uteri tactu dolens*,
and we may presume something from the preceding
labour as it was more easy or difficult. I said that
Bleeding is the only remedy which is to be pre-
scribed as the symptoms of Inflammation are more
or less clear or distinct.

Having

Having now finished the Abdominal Phlegmasia
I come to the,

Articular Inflammations.—

The Rheumatism

Systematics are here extremely confused. Vogel refers it entirely to the Articulorum dolor; Sauvages again, proceeding on a false fact, refers it to the Muscles. Linnaeus defines Rheumatismus, "Musculorum dolor;" the Arthritis "Genicularum Dolor;" but this amounts to nothing. — I shall endeavour to go further, I have opposed these characters — First with regard to their cause, the Arthritis sine causa externa evidente, but in 99 cases of 100 where we can condescend on the remote Cause of Rheumatism it is by the application of Cold; but not in the Gout, except an ambiguous strain which brings on both diseases. — When the predisposition to Gout occurs, a strain or strait shoe may be an occasional cause.

Diagnosis.

Rheumatism occurs from Cold, whereas the Gout seldom comes on without a preceding affection of the Stomach, either a loss of appetite on the day

day preceding the attack, or a very voracious appetite. — In both cases it is an affection of the Joints; but there is a difference with regard to the joints affected. The Rheumatism affects the larger joints, as the knees, the elbows, and above the wrist; but it is contrary to this in the Gout, for the disease is there below the wrist, and in the smaller joints. The Gout sometimes attacks the hip joint first, but this is rarely the case. It more commonly affects only a single joint at a time, and when it goes to another it is with evident relief to the joint first affected; but the Rheumatism rarely attacks a single joint but is extended to more joints. In the Gout it is more fixed and constant.

They are different in the manner they are liable to return. People are often affected ^{with the Rheumatism} not above once in their life time; but the Gout, after catching hold of a person, seldom leaves him long, and returns spontaneously, without any evident cause, at stated periods, though these may not be exact. The Gout regularly observes the return of the same seasons, hence the Gout has been called "Dolor periodicus"; but it does not observe very exact stated seasons, but only one or other of these seasons more regularly than

than the other. Another difference is their connection with the system; there are few instances of the Gout coming on without a previous affection of the Stomach and accompanied with some affection of the Internal viscera; but the Rheumatism does not so. The time of life too of the patient is a mark of distinction, but not absolute; for the Gout seldom attacks people under 35, from which time the system is constantly declining; but 19 of 20 Rheumatisms occur before the age of 35. — The temperament is still more ambiguous. They both affect full and plethoric habits, the more pure sanguine with smooth skin &c; but in the Gout there is a certain largeness of size, and wants the Nitid Cutis that is liable to Rheumatism.

Rheumatism and certain pains of the Joints, as those arising from Venereal and scorbutic causes, are to be distinguished from one another; but I shall refer this to the Chronic Rheumatism, with which alone there is danger of its being confounded. At present I am speaking only of the Acute Rheumatism, to which I now proceed more particularly.

Historia Morbi.

Since Sydenham's time this has been well given,
(and

and properly understood; wherefore it is not necessary to say any thing here upon it.

Proximate Cause.

This arises from a consideration of its Remote causes. In its remote causes there is a predisposition which consists in a certain effect of Cold in the body, a certain construction of the Solids produced by Cold; at least a peculiar modification of the extreme vessels from Cold. A particular proof of this deserves our consideration.

I put the mean heat of the Air at 62 degrees. It may vary in different Climates, but in this it is the mean temperature of the Air. There are few Climates in which the temperature of the Air is constantly above or constantly below this, perhaps in the Antarctic Circle or torrid Zone it may always be above or below this. We distinguish between those that have it so much below and so much above. This difference must be determined by the Latitude. - There is a middle point in which the Globe is equally divided between a temperature below & above this. To determine a Climate to be warm or cold it is necessary only that it be above or below this.

There

Rheumatismus.

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There are some other considerable varieties of climates. In Europe, the Southwest of England is the least liable to considerable vicissitudes, its temperature being more equable. Some effects also arise according to the distance of a place from the Sea and from Trade winds, as places being to the Lee ward or Wind ward of those winds; thus the Western side of our continent, though it be in the same latitude, with it is warmer in winter than the East coast of America, and the coast of China is colder in winter than other parts of Europe in the same latitude.

As to the difference of Latitude—England is a cold Climate, often below 52, and Rheumatism often prevails. In Lind's hospital 350 Rheumatisms occurred; but if we go to the South the frequency of Rheumatism is constantly diminished. Clegborn, among his other Inflammatory diseases, does not mention Rheumatism, from which we find that it is very uncommon in warm climates—If still farther South Rheumatism is still less frequent. Hillary, in the course of many years, mentions the occurrence of Rheumatism but once, or twice.

Rheumatism by no means appears so frequent in winter as in the Spring; and during Frost it appears little.

little, but becomes frequent on the coming on of the Thaw. This seems contradictory to our general assertion; but it shews us that two circumstances are necessary to its production.

1. A rarefaction of fluids supervening a constriction; or
2. When the fluids are previously rarified by heat, a degree of Cold condensing them will bring on Rheumatism, hence the Seasons in which these vicissitudes occur are Autumn and Spring, and we find Rheumatism most commonly prevails in those Seasons.

But in Autumn and Spring only can we mark it to be Epidemic; and when it otherwise occurs, we can mark its occurrence from similar causes, viz, Heat coming on after Cold. Either when the rarefaction supervenes the constriction, or vice versa, we must conceive a distension coming on the vessels affected; which distension gives a sense of resistance which last always produces a reaction; therefore an increased impetus is produced in the vessels of the part; this is produced like all other efforts by the intervention of a Spasm, which is general over the System, and produces Fever. — Inflammation may be owing to Stimulus applied

applied, especially where it arises from external causes; but, in the case of Rheumatism, it arises from distension giving an increased impetus to the vessels of the part from whence it is communicated over the system. It is accompanied with a diathesis Phlogistica. I need not say that this consists in an increased tone of the arteries. I again repeat that the Phlogistic Diathesis, as affecting the whole, may be imputed to the topical affection or irritation; but the presumption lies that it is produced by the general causes producing predisposition, i. e. by the causes producing constriction, this Diathesis is especially produced, and many considerations lead us to believe it subsists independent of the topical irritation of the part.

This doctrine appears probable from the same predisposition to Rheumatism being the predisposition to all Inflammatory diseases; but Rheumatism is certainly in proportion to the cold in different climates, but it is not in proportion to Pleurisy and Peripneumony, for these appear frequently in warm climates where Rheumatism hardly appears at all. How this is to be explained I cannot tell.

Rheumatism

Rheumatism appears in warm climates because the Heat keeps up the action of the extreme vessels. But this does not affect our general proposition that they all depend on the general doctrine of a Phlogistic Diathesis determined to particular parts, independent entirely of the topical affection. This doctrine explains the combination of Phlegmasia, and the occurrence of this in different parts of the system at the same time, and I think it is evident in Rheumatism, as it changes its situation every day.

In the climates where Rheumatism is frequent it may attack any one; but certain temperaments and certain constitutions are much more frequently attacked than others. Thus Sanguine are more liable to it than the Atro-bilious or choleric. The same temperament that is liable to Hemorrhagy, to irritation of the Arterial System, must have this disease by an increase of the tone of these vessels. — Rheumatism must be considered as an Inflammation, but it differs in this that it is not liable to supuration. No instance in physic of its ending in suppuration unless a Phlegmon of the other parts is joined with it. — Boerhaave's account of this is

is not satisfactory; there is no means of determining it but the increased Impetus may be less in Rheumatism than in any other Inflammation.

It may take place in small vessels not liable to make effusions sufficient to be converted into Pus, or into vessels inclosed in such compact membranes as will not admit the due dilatation for fluids of a sufficient consistency. In Rheumatism there are considerable liquid effusions. Dr. Boerhaave has many facts to this purpose, that in the neighbourhood of the affected Joint tumours have been laid open discharging effusions but not convertible into Pus.

Cure.

From its being an Inflammatory disease we trust the Cure to bleeding, early employed and in considerable quantity, according as the circumstances of the disease indicate. The French formerly used excessive Bleeding, which were highly pernicious; and now, perceiving their error, they have run into the contrary extreme. Licutaud tells us to be very sparing of Bleeding, and runs into the contrary extreme from his predecessors, and takes it up upon a theoretical footing

holding that Rheumatism is not an Inflammatory disease. But the opinion is scarce deserving a refutation, for all the Inflammatory Symptoms are present in this disease, viz Tension, Redness, the appearance of the blood &c.

It is therefore necessary to bleed, according to the former habit, of the constitution to bleeding, and according to the strength of the patient; but it has its limits, for I knew a case of moderate Rheumatism, where a pound of blood was drawn from each Arm, and a deliquium animi ensued. Such vast bleedings, by the great debility they produce, render a person much more liable to the disease, as he is by that means much more liable to exposure to Cold. The bleedings may be continued to any length of time that the violence of symptoms seem to require. As however I have seen the excess, of bleeding I have been cautious; and the hazard of excess of bloodletting may be lessened by the use of topical bleeding; but there I am diffident of from experience of their causing the disease only to shift to another joint. The Rheumatism is more founded on general Diathesis than topical, and hence only general bleeding can relieve a general

general Diathesis by producing a general relaxation; but whenever pain is violent in a particular part and continues long in one place then topical Bleeding is serviceable.

An observation to be made in topical Bleedings, is that however violent the pain is in the joint, if it is attended with no swelling, they are not applicable, and only when the swelling and redness are come upon the part. Topical Bleeding may be well executed by Leeches, but the Cupping Glass and Scarificator are to be preferred.

The other topical applications are of very little consequence, as the Prubefacientia. I have observed something like a translation of Rheumatism; the Prubefacientia, Volatile Oil, &c produce a shifting of the disease.

Blisters are proper when the disease fixes on a particular joint, and thereby threatens to become Chronic.

Fomentations and warm bathing have been employed, but Mintringham and Baker have said they do harm in the beginning of a disease, for the rarefaction of the blood occasioned by them increases

increases the case of pain, viz Distension, and should not be applied till the constriction or spasm of the parts is in some measure removed. For this Indication I mentioned the Rubefacientia, but these can give no great relief in a general Diathesis and often occasion a translocation of the disease. Blistering is a more effectual remedy.

While the general Diathesis subsists it is giving the patient a great deal of pain for a little relief, and when the disease is more evidently topical and accompanied with that redness that promises (that promises) the solution of it, Blisters may be employed.

From the doctrine of Phlogistic Diathesis being the foundation of Rheumatism it is evident every part of the Antiphlogistic Regimen is necessary, and we must avoid all irritation, as the Irritation of all Animal food. Many have said that the disease was curable alone by low diet, and Sydenham suggested the use of Whey for every kind of Diet. This must be readily digested, easily pass the excretories, and serve as a diluent. As to the *Dieta Aquea* of the Italians, I should think

think the throwing in a great quantity of plain warm water must be excellent.

2. Any thing that diminishes the increased impetus of the fluids; hence Refrigerants, and the use of Acids in particular, are of service. Rheumatism has been considered as a Molimen Hemorrhagicum, and as Acids are proper in Hemorrhages why not in Rheumatism?

Nitre has been much employed, as a Neutral it relaxes the surface of the body, as a Saline matter it promotes the secretions and excretions and is an excellent remedy.

Antiphlogistic Purgatives have been much employed, but that these are efficacious I have thrown out my doubts, when treating respecting Inflammation in general. When Rheumatic patients can hardly bear the least motion, such a frequent conatus feces excludere; must be hurtful.

These are the most of the remedies proposed; but there is another neglected by most, which is the practice of Sweating. Rheumatic persons are disposed to a constant sweat, and Practitioners have said the urging such Sweatings are generally

ally hurtful; but they have been too cautious, & their ill success has turned on some difference of administration. The first that seems to have brought it up here was Dr Dover, or Dr Clark in Edinburgh, of whom the last did it by the St Minder: Cornu Cervi, and Sack whey.

All the difficulties may be urged against the Practice that were urged formerly against fevers. In certain circumstances of the disease it has done much mischief, and Dr Clark found, after pushing the sweat 10 or 12 hours, the symptoms considerably aggravated, when he was obliged to desist and have recourse to Bleeding; but we have now a particular advantage from Dover's powder, which procures sweat with the greatest ease of any remedy we know. Opium has long been esteemed the best Sudorific; it excites the heart & arteries, and it relaxes at the same time the extreme vessels, and the operation of Opium is rendered much safer by the combination of Neutrals and Emetics, both which have a tendency to overcome the constriction or spasm. There is some nicety required in the administration of this in general; it should not be attempted till there is some relaxation of

of the Spasm by Bleeding. In some cases I have given it when considerable Fevers have subsisted.

But a great deal depends on the Administration of the remedy, and two or three particulars must be taken notice of.

1. The Sweat is only proper to be carried on when the patient is wrapt up in Woolen. Linen is too liable to cool, and may check the Sweats with the utmost danger.

2. The Speccacoanha, which is an ingredient in Dover's powder, is very apt to excite Nausea & Vomiting, which last will be excited the more, and the Dover's powder thrown up if much drink be given to the patient, which the thirst at that time suggests. Wherefore a patient ought, for sometime after taking the Medicine, to drink as little as possible. By refraining from drink the Nausea will be kept up; which, if it is without Vomiting, is one of the chief means of promoting the Sweat, and on which the success of the Medicine depends.

3. That we take care that the Sweat is conducted with as little heat as possible; hence we should avoid exciting it by an additional load of bed clothes; only it may be advisable to give some additional

additional covering to the lower extremities, and when the sweat does not descend to the feet we must apply warm bricks &c to them.

4. That the sweat, conducted with as little heat and hence with as little anxiety to the patient as possible, should be continued for some length of time. It ought, if possible, to be continued for 24 hours; but without renewing the dose it is not easy to keep up the sweat above 12 hours. —

I agree with Dr Chambers that it is proper for the patient to continue in bed for 48 hours, taking great care to defend the bed from external cold.

5. The last particular is, that it should be exhibited in the day time, exhibiting the dose in the morning and continuing the sweat through the day, for if it be given in the night time the patient falls asleep and is apt to shake off the bed clothes and give admision to Cold. — The sweat also succeeds much better when the patient does not fall asleep. Why Sleep should be unfavourable to sweat is sufficiently obvious. In Sleep the action of the Heart and Arteries is considerably weakened, and it is certain from experience that the Perspiration is diminished, the pulse weak

weak, and the Secretions in general diminished. This rationale of the matter will be sufficient. From many trials I have found the Night to be by no means so effectual for administering it. — The Cure of the Plague has almost entirely been made by Sweats, and practitioners made it a rule that the person to be sweated should be kept from Sleep. Their doses were small and the effects produced were of short duration. Sensible of this they repeated their Medicine at different intervals and produced successful Sweats. I do not doubt but that they all agreed in this from accurate observations.

There has been one more Remedy spoken of with confidence; after the violence of the fever is abated by Bloodletting, and the Urine shews a considerable Sediment (what is called the breaking of the Urine) they advise the application of the Bark. I have no experience of it, and in my opinion it is a doubtful remedy.

Where Rheumatism is complicated with Remittent fever the Bark is to be depended on; and though it does not begin as such, yet it may manifest such a type by its subsequent Remissions.

Chronic

Chronic Rheumatism.

This is very difficult to define. There are pains like it, as those from Venereal and Scorbutic cases. It seems to depend on a certain Atony (loss of tone) in the vessels of the Joints. This is expressed by a Coldness of the Joint, by this being difficultly (being) brought to Sweat, and, when it does, the Sweat is Cold. But how is such an Atony produced? It is by overstretching. Sprains that subsist for any time are no other than Chronic Rheumatism. But how does this Atony in the vessels give occasion to the pains? The only explanation is by supposing them to be tonic vessels. — Why is Chronic Rheumatism so often attended with Paralytic affections to the part? It is owing to Atony extended there, and is the reason why Paralytic affections are so often attended with acute pain.

Cure.

This is attempted by all Remedies exciting the action of the Vessels of the part; which is answered by constant warmth.

1. Nothing is more necessary to dispell all the remainders of the disease, to prevent a relapse, and to prevent it's changing into an Acute Rheumatism, than

than the wearing a flannel shirt, and flannel to the part. The surface of the skin ought to be defended with great care.

2. Warm Bathing tends also to relieve the disease.

3. Friction - as by a flesh brush.

4. Blistering and Rubefacientia. Artificial blisters are not so effectual as healing up the part altogether, and then applying another.

5. Cold Bathing is a powerful Stimulus.

6. Frequent Exercise, but rather in the way of Gestation and Riding.

Arthritis

Arthritis.

The distinction of Gout from Rheumatism is,

1. By the time of life in which it makes its attack. This is not universal, but it is general with few exceptions. It seldom attacks persons till after 35 years of age.

2. By the Temperaments which it attacks it is distinguished.

3. By affections of the Stomach preceding.

4. By the absence of external causes. This is a part of our character that gives the greatest difficulty. When I say "the absence of external causes" it must not be understood to be universal. It is only meant of visible causes, for there are certainly certain causes unobserved, that may be the cause of this disease, which is contrary to the case of Rheumatism where you can generally see the cause.

5. By the part affected; for 9 out of 10 affect the foot, and 19 out of 20 either the foot or hand.

6. Gout mostly returns from time to time, at first with greater interval of years, at length it becomes annual, or vernal and autumnal.

7. The Gout comes and goes with an alternation of affections of the internal viscera, especially the Stomach

Stomach, plainly, shewing a connection with the whole Nervous System.

Historia Morbi.

For this see Sydenham. Musgrave is a good Author on the Anomalous Gout, but he strains matters.

Proximate Cause.

Nothing is so universal amongst Physicians as that the Gout depends on a Morbific matter — the Arahlian School is the only exception. — Before I enter upon this I must say that the doctrine of a morbid matter is so strong that it will be necessary for me to destroy that opinion previous to my giving a new doctrine. I must observe then, 1. That the opinion of a morbid matter is purely hypothetical, no proof of its existence. Neither Analysis made on the blood, nor Excretions, have shewn it.

2. There have been 20 different opinions about the nature of this morbid matter; some supposing it an Alkali, others an Acid, a Neutral, &c, which is a certain proof that no one of these cases is established in fact: Except those that make the Gout depend on a superabundant earthy matter, as most

most Gouts have chalky affections, or Calcareous: But this appearing is no reason that it is employed in the beginning of the disease as it's cause; It is only in the end of the disease, and not one in ten are affected with it. It is therefore rather an effect, than a cause — therefore I say that the notion of a Morbific matter is hypothetical, founded upon a fallacious hypothesis, on a humoral Pathology, which supposed any disease depended on a particular acrimony irritating the vessels, or from Lentor. We know that pains may arise merely from distension, and Tumor more from Constriction of the vessels than the Obstruction of any particular matter, as Acrimony, Lentor, &c; and I think I shall be able to show you that there is much more reason for supposing the one than the other. There are two other Arguments in favour of the same. It is said that the disease is hereditary and contagious.

With regard to the disease being hereditary, it is true that some hereditary diseases depend upon a peculiar ferment carried from father to Son; but in 9 cases out of 10 it is owing to a peculiar temperament. Perhaps hereditary diseases depend on a peculiar taint which discovers itself early in life, as the

the Lues Venerea, Scrophula, &c. Now Gout does not appear early in life, and it is difficult to conceive how a taint can be removed for 40 years.

If it were a contagious disease this Argument would be stronger; but it is not true in fact. Neither Sydenham, Musgrave, Warren, &c. mention it. Van Swieten is the only one, and he adduces two instances, one of a Dog, the other of a Lady from sitting in her Brother's Chair.

There is not a particular of regimen or remedy in the Gout that is not in dispute. This is owing to our ignorance of the Theory of this disease. If I can conduct you to the truth I shall, but at any rate I shall avoid Errors. I think errors have been generally prevalent in this subject. It has been said this disease depends on a peculiar matter generated and subsisting in the system. This however is not founded in fact. I have endeavoured to shew you that there is no Reason for the supposition of a morbid matter. Physicians formerly supposed that every pain depended on some acrimony applied, every obstruction to some lentor in the fluids, but the contrary in many cases is evident, and there is no reason to suppose a morbid

morbific matter either Acrid or Viscid.

They alledge that the disease is contagious. Dr Boerhaave asserts it; but their proofs are by no means satisfactory, and Men even of credit show no credit in chusing their facts. In short, Van Swieten is reduced to one instance, that Women have had it from their husbands. But the negative proofs to the contrary are numerous, and though these do not absolutely destroy facts, yet they have great weight with such as appear very improbable.

These Arguments then do not lead us to conclude a morbid matter, and the Supposition does not explain the Phenomena. For,

1. Supposing even a morbid matter, there is no reason assigned for its determination to the Joints; we have no explanation of this, and such a determination is not in the course of the Secretion to carry such an Acrid fluid. The Secretion of the Synovia is not affected, and only the external parts of the Joint are affected; the Chalky stones are formed under the adjacent skin and muscles.

2. If the deposition is not accounted for, the reabsorption is still worse explained. That any effused fluid may be again absorbed is certain; but such

a sudden reabsorption is not so easily explained; it requires sometimes and will not be so momentary as appears in this case.

Suppose some of these difficulties could be removed, it is in consequence of the translation of the matter to other parts that puzzles us. We have nothing in Physiology to explain why a pain in the Toes should on a sudden occur in the Stomach. No attempt is made to ~~say~~ what relation one matter can have to the Stomach and extremities of the Joints.

These Phenomena, that have been employed in favour of morbid matter, are strong against it. — Such a pain from our notions can be easily translated. — As to the means by which these translations can be conveyed, none of them effect a change on the matter. Cold &c affects the motion of the System and transfers motion & a state of motion to different parts. — When a Gouty affection is in the stomach, how do we render it's removal to other places? We employ powers that will restore the tone of the Stomach, as Spirits; or such as will change the Spasmodic affection of the Stomach, as Opium; but I know not how this affects the motions of the matter. — The state of the motions will account
(for)

for the change in these appearances, and for the translation of the matter; — the matter being given, the motions are only to be attended to. I shall endeavour to establish another doctrine, one that will supercede the notion of a morbid matter in the system. To do this I shall lay down a few propositions.

Ist The gout is a disease of the whole system, depending on the habit and temperament of the body.

Some diseases are purely local, depending on the peculiar ^{constit}formation and organization of a particular organ. Others may be called local as arising from an affection of a particular part, or this communicated to the rest of the system; but depending on a general power in the system aggravating the topical affection. A thorn on the nail will produce fever which must depend on the general powers of the circulation being affected. Fever is an universal affection, because its cause does not act only on a single part but on the general powers of the system.

As they depend on the general affections of the system, some may occur in every system, others are different, that, while the causes are universal they

* The old philosophic adage. They are general rules
with some exceptions, which however often confirm the
Rule.

they depend on a previous Temperament, which is a part of the original constitution which subsists and gives a character through life, depending on the original stamina of the solids, fluids, and moving powers. Thus Rheumatism can by its exciting causes affect all men and every system; but the Gout is different, and its causes only operate on the predisposed. The original constitution is a term that holds universally with respect to the Gout; but I do not mean an hereditary taint, for such a constitution may be acquired by an irregular life also.

This, it appears, is a disease of Men in the proportion of 19 in 20. None of the proofs are universally absolute; they are general not absolute rules, * acceptis conformal generum, and it occurs in those Women approaching near to the Male constitution, the Viragines. — The Gout does not affect Eunuchs. It may be referred perhaps to something in the Semen, on account of people of feminine constitutions not being affected by it, but we see that women are affected with it. — But, among the Men it is a peculiarity of Constitution, for it affects only the more evidently robust; and
for

(a) The hemorrhoidal people that are liable to the
Piles are liable to the Gout.

for the most part it affects those of the largest size. There are exceptions to this, but the rule is pretty general. Those of a full habit are particularly liable to it, and very rarely does it affect lean and meagre persons. It very rarely affects those of fine skins; there is a certain roughness & crassities Cutis that is peculiar to the Gout.

Of the Temperaments, as they have been distinguished, it does not affect the pure Temperament, but the compounded, what has been called the ~~Sanguine~~ ^{choleric-sanguine}, not the Sanguine. It is seldom that the pure sanguine are affected by the Gout, and the Arterialious also. The hemorrhagic, tho' liable to Rheumatism, are very seldom liable to the Gout. The hemorrhoids are liable to those persons who have congestions in the Vena Portarum. People of a Phlegmatic sanguine habit are very liable to this disease. The Indolent and luxurious persons are chiefly affected; but in this there must be an original predisposition to the action of these Remote causes. The laborious, and abstemious are seldom or never affected. It has been a question what species of luxury has been most favourable to the Gout. — The great eaters

Arthritis

118.

eaters, in my opinion are more liable to it than great drinkers. It depends on the constitution of the nervous system. — It has been said that the wise are more liable to it than the foolish; but this is not much to be depended upon. But a proof that it depends on a certain state of the constitution, is the period of life in which it attacks, never below the age of Puberty.

To give the Morbi Etatum there must be given a general change in the moving powers; and this confirms me that the Gout depends on the governing powers of the Economy, and not on a particular matter.

For the confirmation likewise of our doctrine I would add it is being an hereditary disease. This has been taken as an argument on the contrary side; but it is much better explained from Temperament than from Morbific matter.

Another argument arises from an observation of Dr Warner; he says it is said to continue in one part or other till the peccant matter is expelled out of the body; but this he rejects and says the peccant matter is never expelled out of the body, because after a fit every trifling circumstance will renew it.

all

All his difficulties depend on a *pelitio principii* on the subsistence of a morbid matter; but it does not depend on this - it depends on a *diathesis*, a disposition of the System that is always present, and will account for its recurrence from the causes acting; it depends on a constitution that is always present and is so early excited to particular effects. The Gout then is a disease of the whole body, that depends on the habit and temperament of the body.

IInd The Gout, as a disease of the whole habit, is a disease affecting the general System of the Nervous System.

Every disease of the body depends on the motions of the System, which must depend on the primary moving powers, the Nervous System; but there are certain diseases that depend on the state of the matter of which the Solids and Fluids consist; such are the Scurvy, such are the Syphilis; and the matter must be changed or expelled from the body. There is a distinction of Diseases which chiefly affect the Sanguiferous System. All others however depend on the state of the motions and are referred to the Nervous System.

As to the Pyrexia I think it necessary to shew these

These were primarily founded in an affection of the Nervous System, the cause first operating on the Nervous System, and upon that part that is most connected with the circulating system, such is Fever, Phlegmasia, &c.

Though the Nervous System is affected, yet it is that part more immediately connected with the circulating system. - Others again affect the Nervous System long before they affect the Sanguiferous System, and the affection of the former subsists long before it is discovered to affect the Sanguiferous System; and this I take to be the case of the Gout.

This then is our 2^d proposition, viz, that it is a disease affecting the Nervous System, and may be called a Nervous disease. The Nervous System has its different parts, and in one part ^{is} more connected with the circulation and less in another. Some affections of ^{it are} independent of the circulation, and others connected with it; and this establishes our distinction of Pyrexia and Neuroses.

The Gout, as it affects the Muscular fibres of the Alimentary Canal, does not so much affect the circulating system, may be said to belong to

to the Neuroses. It is however part of both Pyrexia and Neuroses. If it is a disease of temperament it is a disease of the Nervous System. The temperament does not depend on the state of the fluids, but on the moving powers and the state of the solids connected with these moving powers. These however may affect the fluids; but every disease of temperament is more especially a disease of the Nervous System.

We know the Gout to affect the Nervous System from its **Remote Causes**, viz Excess of Venery, which is to be referred to a change of tension which the exhaustion of the Seminal fluid occasions, and the excess of Venery operates chiefly on the Nervous System.

The **Exciting Causes** too, as intense application, can only affect the Nervous System. It is evident from the first Symptoms of the Gout, which are in the Stomach. We know the state of the Stomach is an index of the state of the Nervous System. It is evident from the Symptoms that attend the Acute Gout; though the Gout be an affection of the Nervous System it is communicated commonly from the Nervous to the Sanguiferous, there producing Inflammation, and this we call the Inflammatory

lory state of the Gout; but the ordinary symptoms that precede do subsist and take place, because the Inflammatory state does not often succeed; and we find the Symptoms that are substituted are affections of the Nervous System; so, though some may be referred to Pyrexia, yet the changes are owing to the Nervous System.

The Passions of the Mind bring on the Gout. — During the Paroxysm of the Inflammatory state the tone of the Mind is much affected, and previous to it's coming on the mind is dejected. — We know too that it ~~changes~~ changes the Nervous System considerably, for Vertigo, Asthma, Epilepsy &c, are removed by the coming on of the Gout, and hence there was a previous affection in the Nervous Fibres. —

Hence it is evident that much of the disease is in the Nervous, independent of the Sanguiferous, System. It's connection with the Stomach must be attended to, as it gives an illustration of the whole. The Stomach is an organ of peculiar Sensibility, formed of Muscles that are in constant exercise, and from it's number of Nerves it must have great connection with the Sensorium and the System in general. — The Sympathy between the Stomach

Stomach and other parts have been explained by a communication of Nerves either in their course or origin. This explanation is unsatisfactory. — We say that the different parts of the Nervous System have a communication by the intervention of their common origin, the Brain or Sensorium. *vid. Institutions of Medicine.*

What we call the Nervous System is every where formed of the Medullary Substance, and this is a continuous matter from which we know it capable of propagating motions from every one part of the System to every other; and, however there may be different Nerves from their origin to their extremities that may account for this, yet we explain it by the whole being connected with the common origin with which they all communicate, and motions propagated through Nerves excite motions in the Sensorium which are propagated through other Nerves; therefore, without taking notice of the Modification in the Sensorium, they may communicate, viz every one extremely may affect every other. — Such communications depend on the connection of the parts communicated, and the common origin. The relation of the Stomach to the

The Sensorium is evident, and the relation of that to the surface of the body is no less so. — Those on the surface are liable to great changes, for the Arterial fibres differ in their state of tension. But, not only from the different action of the Heart, they are exposed to vicissitudes of Heat and Cold. As they are connected with the most universal organ of Sense, the skin, they must have a considerable effect on the state of the Sensorium, and the actions are mutual, viz, from a part to the Sensorium, and vice versa. Hence we see, without any absolute connection of parts, the intervention of the Sensorium may be sufficient to explain it. —

Hence affections may be communicated to different parts without an actual translation of Matter. When Snuff is applied to the Nose it excites Sneezing, and excites a Convulsive motion, ^{yet no body} imagines the Snuff to be conveyed to the Brain and from thence to the Muscles &c. — There is no doubt but such communication may obtain in distant parts

As we have shewn the connection between the extremities of the Arteries on the surface to affect the Stomach, this may take place in the same Stomach

Stomach and other extremities of vessels. I know a Lady liable to affections of the Stomach and Inflammation of her Eyes, which constantly alternate; and when one is absent, the other is sure to be renewed.

There is a particular connection between the Stomach and vessels of the lower Extremities.— Whether Cold or heat be applied to the lower extremities it affects the Alimentary canal, and the Stomach in particular; if my own feet are wet I have pains in my Stomach, and these are removed by heat. Van Helmont dislocated his Ankle when very hungry and just going to dinner; he immediately lost his appetite and had a Nausea. On the reducing of the dislocation, the Stomach was restored to its former condition. This state in the lower Extremities commonly occasions Spasm, flatulency &c, of the Stomach.

From this general view of a connection established, it appears that the Gout, though a disease connected with the extremities, may be an affection of distant parts. I say it especially appears to be a Nervous disease from the actions and functions of the Stomach.

The

The Phenomena of the Gout are strong in proof of the general and particular conclusion I am forming: The general conclusion is a great step in our Theory; it supercedes the doctrine of a morbid matter, and it shows that affections may be communicated without a translation of matter, which is impossible on our explanation.

To explain myself more particularly, I propose a Lemma, viz, — The action of the Brain, however exerted in different parts is not always exerted in consequence of impressions of Impulse; but of Sensations of Consciousness, by which the Brain is changed in its condition. Hence its action may arise as well from a consciousness of want of tone or impression, as from these in excess.

This action of the Brain, in consequence of the different states of the Nervous extremities is the reaction which is an effort of the primary moving powers, to overcome resistance and restore debility, viz, *Autoxergia*. — If I believed the Gout depended on a matter acting on certain extremities of Nerves in the System, I might take that for impulse; and from this the action of the Brain is excited. But the Brain may be excited from want of tension and

and Impulse in the Nervous Extremities, hence a reaction to recover the debility and tension. The Gout arises from a loss of tone, which occasions a reaction, which is discovered by an Inflammatory affection of the Joints. This I think is a matter of fact. — The Mechanical connection the rationale of these two states, ~~as~~ cause and effect, you may not conceive; but it is true in fact.

The Proof.

1. That the Gout always arises from causes of Debility; this perhaps may be the cause of its occurring only in the decline of life, when the vigour of the System is not extended to the extreme vessels.

2. That it is a consequence of Indolence; for we know that exercise is necessary to support the functions in due vigour. Whatever is the state of our System, exercise of the functions is necessary; but this depends more or less upon habit; from withdrawing the accustomed exercise the vigour of the System declines. Hence no people are more liable to the Gout than such as formerly used much exercise but left it off.

3. Excess of Venery.

4. Intemperance.

5. —

5. Excessive watching.

This last must be explained; that the distribution of sleep and watching must be once in 24 hours. A man being up when the hours of sleep ~~return~~ is considerably hurtful, and though he sleeps in a double proportion with respect to time, yet this being taken at an improper time does not compensate for the sitting up; hence the system is weakened by it.

6. Intense application to study.

7. Debilitating Passions. I may add that all great evacuations are means, in those predisposed, of bringing on the Gout.

Acids also must be added; for these undoubtedly act by weakening the stomach. — All the causes I have mentioned are evidently causes of Debility either in the whole or in particular parts of the system.

The Gout therefore comes on with symptoms of debility and a diminished action in the lower extremities; for persons who have generally moist feet are liable to have them dried up in the Gout. The usual evacuation of perspiration is then suppressed. Independent of external causes, the feet are liable to become cold. According to Celsus, Aurelianus

Aurelianus a vacandi dulcedo, formicatio, descensus flatuum, Cramps, varicose Swellings. The lower extremities become torpid, and are averse to motion. A subsultus tendinum &c, and such affections are almost constantly consequences of debility. Varicose swellings also, which are owing to a weaker action of the Muscles and Arteries, which are a means of propelling the venous blood.

The perspiration is obstructed evidently from the Coldness and Dryness on the surface of the body. The debility appears so far general as to affect the sensorium, and the faculties are impaired. — The symptoms of ^{general} debility appear in the state of the Stomach, which is the Index of the Nervous System, flatulence, nausea, &c, occurring.

The Gout therefore is founded on an Atony or Debility of the System, and this is especially determined to the lower extremities, & this produces a reaction.

Recapitulation.

Every temperament is characterized by a certain bias in consequence of which such temperaments are liable to particular diseases, that there is a greater determination to some and less to others than there ought to be. — This may be better understood by

by the 2^d proposition, that the Gout is an affection of the Nervous System. The Nervous System connects the several functions together. It is the Nervous System that gives occasion to the communication of motions and affections from one part to another. This I illustrated from the connection of the Stomach with the other parts of the System; with this it has a Sympathy; and in observing its connection with the extreme vessels in general, as with those in the skin, we readily observe such in the cause of the Gout. The Gout then may depend on a change of the balance of the System, on the general state of the System, and on the general state of particular parts.

As the communication of motion is chiefly by the Intervention of the Brain, certain powers affect the brain, and by that destroy its parts. The action of the Brain does not depend alone on strokes of impulse; but a loss of the tone of the Sensorium will occasion its action.

The Gout then consists in an Atonia & debility prevailing in the System, discovering itself particularly in the lower extremities and other parts of the System. This Atony and Debility is attended with a reaction producing an Inflammatory affection

affection in the Joints, which I suppose is necessary to restore the Vigour and Tone of the System.

To shew that this is a fact I have deduced the proofs of Atony, assigned its various causes, and find that the causes of the Gout are causes of Debility. By all the Symptoms of the Gout it is not consistent in an Inflammatory affection of the Joints; for, previous to that, considerable Atony & Debility prevails.

This part of the disease is in every ^{case} ~~part~~ an Inflammatory affection. It comes on at the period of other Inflammatory diseases; it attacks the membranous parts, that I alledge alone to be the seat of Inflammation; it affects those Membranes which Rheumatism, an Inflammatory affection, inflames. The common account of Rheumatism is, that it is an Inflammatory affection of the Membranes and Tendinous expansions.

End of Recapitulation

The Gout is not a disease within the Capsula of the Joint, not an Articular Inflammation, but there is no dissection, no appearance but allows us to conclude that it is in the Membranes subjacent to the skin. Under this also the Chalky matter is formed

formed. - It is attended also with pain, redness, tumour of the part affected, and with precisely the same state as other Inflammations are. As a topical affection it agrees with Rheumatism and only differs by its cause, and its connection with the System; from hence it may differ in its effects, as the consequences are not found in Rheumatism.

Though the Gout does appear Inflammatory in the Joints, yet this is not the disease, for this is only the efforts of Nature to restore the tone of the System; the whole of the System being in balance the tone of the whole depends on that of a particular part. - The whole Gouty affection does not depend on incidental or external causes alone, as is in some measure the case of Rheumatism, but it depends on a certain condition of the System that renders it liable to a loss of tone, and to a reaction sufficient to recover that loss of Tone.

This Theory which I have given you I expect to be of considerable advantage, as I conceive it to influence and correct our practice. Where there is actually a morbid matter present, as in the Measles, we know it is attended with Inflammatory Diathesis, and this is all by which we

we guide our practice. The conclusion we have formed will go as far as any other in the explanation of the Phenomena of this disease, but as such minutiae as attend the explanation of every symptom would lead us too far into Theory I shall content myself with pointing out one ~~or~~ two difficulties that present themselves.

1st Difficulty attending our Theory is, that while we maintain it to be a disease arising from debility, we see it affect persons of the most robust constitutions.

This is a great difficulty, and how we shall reconcile it I do not know. They are both facts, and must be founded on some laws in the Economy that we are unacquainted with. I shall attempt a solution of them.

Vigorous persons are, on account of that vigour, more liable to Abony, and are from their exquisite tension more liable to be affected by any small deviation from it. — The Economy consists in a constant alternation of Excitement and Collapse; the last of which is in proportion to the previous Excitement; just as a person is liable to sleep sounder in proportion to the fatigue the

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the preceding day; and the most vigorous constitutions in the earlier part of life may be liable to collapse in the decline; more especially if such in the decline omit the use of Exercise.

Not merely by the vigour of the System is occasion given to Collapse and Debility, but they are exposed to greater causes of Debility, for vigorous Men are generally most fallacious, and they are generally liable to go beyond measure in every species of Intemperance. A weakly person may, by Love of Company, go to excess in drinking, but such persons will soon be checked; and the vigorous will in time give that debility which produces Gout. When a Man is confined to a low diet he escapes the Gout; this fact is certain and shews that he has never been liable to Collapse and Debility or to the overstretching which lays the foundation of the disease. When the Gout is already formed it may be removed by low diet for sometime; but if they discontinue the diet it will return; this must be owing to the overstretching. This is some explanation why the vigorous are more liable to affections of the Gout.

2. On account of their most exquisite tension they

they are more liable to deviations from it. *Alque libratum facile movetur*, is a fact borrowed from Natural philosophy. Any cause therefore diminishing tension must operate chiefly on the most vigorous. What condition does a fullness of the constitution imply? When the fluids are in greater proportion than the tone of the vessels to confine them; hence the tone of the System depends on the fullness the fluids occasions. In the earlier part of life the tension of the Arteries is greater, and the tone of the whole is more considerable; but in the decline of life the Plethora occurs in the Veins. When a person has once acquired the plethoric state it may be dangerous to put him upon abstinence. Another observation which follows shows that the vigorous by being full are more liable to that atony causing the Gout, viz many indolent people escape the Gout while those that have ceased from their usual exercise are most liable to it. In such the most Inflammatory state is most ready to occur, as on account of their vigour they are exposed to strong reaction.

A 2^d difficulty attending our theory of the disease is, why the Inflammatory affection is particularly directed

directed to the Joints, and why to particular Joints? Where there are causes of general Atony they are more liable to appear in the extreme vessels as, being the most distant from the Head and Heart. In the Joints the vessels are very small, the most part of them only serous, and few in number; and neither by their succulency and warmth from the subjacent parts are they defended from the action of Cold so well as the other parts; perhaps too from their frequent exercise they are more sensible to such vicissitudes.

It affects chiefly the Joints, and how Rheumatism is only partial with respect to the System depends on the original Constitution.

What I have hitherto said relates to the regular Inflammatory Gout; which is when the state of Atony is immediately succeeded by an Inflammatory affection; but it is not always an Inflammatory disease; it has other states. These I refer to three heads.

1. Where the Atony and debility has taken place in the System, but the reaction of the Brain and Inflammatory state does not succeed. Where then the Inflammatory affection of the Joints does not

not succeed, and then means to restore the tone of the System does not take place, an Atony of the Stomach and of several other internal parts occurs, various Congestions are formed in different Viscera, and various effusions that give occasion to Hydropeical affections.

2. Another state is, when the Atony has not only occurred, but has been followed by more or less of the Inflammatory state, but this has not been long enough supported to restore the balance of the System; for, from this being inadequate, or from some new cause applied, the Atony comes on, and in this case the Atonia, Congestions, and various effusions may take place. An Atony beginning in the extreme vessels may be propagated upwards towards the Sensorium, and in consequence of this affection of the extreme vessels is it communicated to the Brain.

3. A 3^d state of the Gouty Diathesis is, when Atony prevails it affects a particular Viscus and produces an Inflammatory affection of that part. There are many instances of this; but all agree in the Peripneumonia Arthritica of Sydenham and Mesgraves; here the Inflammation that should have

have been excited in the extremities has been excited in some internal viscus.

The Inflammation has often an active determination to the Kidnies; hence Gouty people frequently become calculous or Nephritic. To account for this, we may say there is a disposition in the Blood to separate an earthy part from the rest of our fluids. If there is such a disposition nothing can be more simple than our accounting for it in this way, as the Urine, of all our fluids, is the most liable to a separation of Earth. But our Kidnies are more liable to such a determination, and they are from this more liable to throw out their earth; and perhaps the Concretions in the Joints &c may be owing to this determination in the Kidnies that causes the original production of the Earth.

You will perceive that it is the state of Atony that forms the proper Gout, and is the original disease; the reaction, being only an effort to restore the System to its pristine tone, is only a consequence of the other. Among the cases we mentioned was that of the Inflammatory Gout; where Inflammation succeeds the Atonia, but not being strong enough to produce a Reaction the Atonia subsisted.

Another

* There seems to be no original disease in the Blood that renders it liable to a separation of Calculous concretions; but it is probable it may arise from a particular determination of the blood depending on its state of motion. There is a difficulty attending the explanation of this, but we must be satisfied with the fact that concretions actually follow such a determination.

Another, where the Atony has taken place and the Inflammation succeeds; but the Inflammation does not attend its proper Seat, the Joints, but some internal Viscus; this is a case of Inflammatory Gout directed to an improper place, and is the *Peripneumonia Arthritica* of Sydenham & Meisgrauve. Where such an improper determination occurs, such is often directed to the Kidneys, and this seems to be the reason of that singular connection of the Gout and Urinary Calculus, hence their frequent combination; and those with a hereditary taint from the Gout often have not the Gout but Nephritic Affections. Many instances of this sufficiently prove the mutual connection of those two diseases.

As to the Solution of this, we may suppose there is a certain disposition in the blood to separate Earthy parts, and hence Calculi; and if this is given it must appear more frequently in the Kidneys than elsewhere. Biliary Concretions indeed frequently occur in the Gout; and the whole of this connection depends on the Constitution of the fluids.

Both in the one case and in the other it is in consequence

consequence of the motion of the Blood in certain Vessels that there gives occasion to the separation. This I can only explain by the fact that these Concretions do follow such a determination to the Kidneys. These Organs are more than others under a peculiarity of balance with other parts, as the skin and surface; and suppressed Perspiration we know is determined to the Kidneys, & vice versa. It may however depend on the quantity of matter in the Blood, the quantity of Serosity being in greater proportion. It may be said that on the stoppage of Perspiration there is a greater abundance of Serosity in the Blood, and hence more Urine. Cold applied to the surface produces a discharge from the Blood, and hence they are connected. From cold applied to the feet I have seen a flow of limpid Urine, such as occurs in the Diabetes Hysterica which is a proof that Cold operates upon the Kidneys. Cold too applied to the feet aggravates Nephritic Complaints.

The Extremities of the Vessels of the Kidneys have likewise a particular connection with the Stomach, as appears from the Vomiting of Nephritics. — From these considerations I would conclude that

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that there is a peculiarity in the extremities of the vessels of the Kidneys that puts them in balance with the rest of the System, and upon a change of that balance they are exposed to particular determination.

The two diseases of Arthritis and Nephritis alternate with one another, are never together, and one we know removes the other. I knew a Gentleman, we know removed the other. I knew a Gentleman, having the Gout, that had also the Calculus; at last this Gentleman had a Strangury, which we supposed to be a Catarrhes Vesicae, and were in doubt of whether there was a calculus; several Ulcers discharged about the Perineum &c, and he was affected with all the Symptoms of Plectic. In this state with frequent Strangury he was seized with the Gout in his foot, which proceeded to his Ankle and continued for the space of 12 days. From this time the Strangury left him and his Plectic was much abated.

These alternations are the most certain proofs that they depend on alternate determination, and that the determination is always previous to any deposition from the Blood or any alteration in its nature. Independent of a disposition in the Blood, concretions

Concretions may be produced, by the circumstances of determination; as certain effusions. This case of the Kidnies is a peculiar instance of the determination of Internal Gout. In the Urine, which is so frequently disposed to a separation of Earth, such a determination might not be necessary; but in the Joints it is essentially so; how such a determination produces a separation of Earthy parts I cannot well say. From the experiments of Gaber on the production of Pus he found a quantity of Earth separated, and the Coagulable Lymph may be converted into Earth.

There are two different states of the Coagulable Lymph; one portion is dissolved in the Serosity, another is only diffused, and it is this diffused Lymph which, when separated, forms Concretions. In the Kidnies particularly it may form a Nucleus, which is the foundation of the Concretion and collects the Earthy particles.

Cure.

Whether the Gout admits of a radical Cure, or not, has been a question in the Schools of Physic. It is improbable, that the Gout can be radically cured by Medicines. — If the Gout, as the tenor of

of our doctrine tends to show, is a disease of Temperament, and that this Temperament is hereditary and congenial to the Constitution, it is very doubtful if any management can change this, and especially Medicines whose operation is only partial and temporary as far as they affect the Constitution.

There is no Medicine that can so far change the Arrangement of the Animal Economy as to alter the original temperament. But tho' this is not practicable by Medicine, as it depends on temperament, it is possible to modify the temperament in such a manner that few of the effects, which would have happened, shall arise. — If an opinion commonly prevalent, that the Gout is not hereditary but depends on the course of life of the person, be true, then we can prevent it, and so far change the Constitution by following a contrary course of life.

I conceive the Gout can be prevented by Regimen; it is but giving the patient a little faith to modify the violence of the disease, which is of use to the System. The practice is applied to three different states of the Gout.

1. Before the Gout has appeared in its ordinary

or common form, where only the predisposition can be perceived.

2. When the Gout has actually discovered itself by more or less of the Inflammatory state in the Joints.

3. When it has been formed, but, by some of the causes we have mentioned, becomes Atonic or Irregular.

1. With regard to the first case there is a fallacy as it is difficult to say who are the predisposed; but, joined to a hereditary taint, the circumstances of the temperament may be marked with truth.

— We are encouraged to act in this way because we are certain of the means to prevent the disease; for, I conclude that Labour and Abstinence are in every Constitution a certain means of preventing the Gout. The common people are unacquainted with it: Consider the proportion of Mankind, and the poor will be found to be infinitely more numerous; and though the rich may be often connected in family with the poor, yet we see no marks of it in these last; as by their being accustomed to hard work and low diet, the disease is prevented.

2. When the Gout is formed in the Inflammatory manner.

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The practice for this is divided into,

1. That used during the Interval.

2. During the Paroxysm.

Of the practice employed in the time of the Interval there are two divisions, as relating to Medicines and to Regimen. — The Indications I lay down are founded on the doctrines I deliver.

1st To obviate that fullness of the System which proves the cause of Atonia which produces the disease.

2^d To obviate the Atony by supporting the Tone of the System in general, and particularly the tone of the vessels of the Joints, taking care that the Medicines here employed do not contradict the first Indication by producing fullness.

3^d To obviate the Atony by avoiding its Remote and Occasional causes.

1st Indication. The means of obviating that fullness is, first, by Abstinence; nothing has been oftener recommended than this, but it has been questioned whether it is not a dangerous remedy, as giving Atonia, which we mean to avoid. I say as to this — if this course is begun early in

* Perhaps it may be said that the Vulgar, by this means,
are affected by some other diseases, in consequence of Ab-
stinence, but I am ignorant of any.

in life, before any symptom of the atonic state appears, it is absolutely safe.

The common people are not liable to this or diseases of this kind, and it may be supposed that this is owing to their labour; but it is chiefly owing to their abstinence, for many of our Artizans use no labour at all, yet are free from the disease. Hence if such abstinence is begun early in life such a constitution will be avoided.

Gouty persons will swallow any Medicines while in pain, but when their voracious appetite and love of pleasure are returned they run into their former excesses, therefore we should tell them that Medicines are ineffectual, and Regimen will perfectly cure them.

I have laid down the general Indications with regard to Regimen and Remedies. When the Gout however is already (is already) formed and the system is in an atonic state, it is uncertain how far we can proceed with Regimen or low Diet; but if it is begun early in life it is highly safe. Two conditions are necessary for the putting people on a low diet.

1. That the constitution has the appearance of
vigour

vigour, and that it has the appearance of strength; but especially,

2.^d When it appears in the Inflammatory way, in these cases we may use low Diet. — When it attends a constitution with an hereditary taint & considerable Atony prevails, we must be cautious respecting Regimen. It will be very doubtful in people not entering into it till above 40 or 50. If the disease has attached people of a moderate diet we may quell it by abstinence, but in people with a habitude to full diet it is dangerous to make changes.

This is in some measure regulated by the circumstances of Execution, by the choice of Diet. Our diet may be reduced to three different classes in proportion to the nourishment they afford.

Class 1.st Herbs and Succulent Roots (the Olera) and fresh fruits — these contribute the lowest diet.

Class 2.nd The Larenacea and Milk. These two are necessarily combined. They contain more nourishment than the former, and with moderate exercise they are able to support the tone of the System: They do not require much the exercise of Digestion, and are not liable to be accumulated in the System, because

* By Lymph is always meant the Coagulable part of the Blood,
in contradistinction to Serum Ferosity &c

because they are easily transpired, and do not give that dense Elastic blood that gives Inflammatory Plethora. - Plethora does not depend on the quantity, so much as the quality, of the blood; a
 * dense Lymph, and great proportion of Globules, form the noxious Plethora. The Farinacea and Milk are not liable to increase these much.

Class 3. Animal Food. This affords the greatest proportion of Lymph and Globules; and those of the dense elastic kind that form the Inflammatory Plethora.

Moderation therefore in Diet will depend on the choice of these different classes of Aliment; the lowest is seldom used, the middle is the properest to relieve the Gout. We may moderate the diet so as to obviate the Inflammatory state, and not carry it so low as to endanger the system in general.

When the Atonic state is considerable our second Class of Aliment, as being too low, may be dangerous; instead of which we may use a trimming diet, such as Animal food and Vegetable intermixed. The most universally safe is such a mixture of diet. - This consideration consists in avoiding meat suppers

suppers. Notwithstanding the Objection I say that Sleep is unfavourable to Digestion, that the Aliment is longer retained in the body at that time; hence it must be greatly increased by full meals before Sleep. Sydenham advises a total omission of Suppers, but this is never necessary, and our moderation will be more secured in diminishing our meals. — We might take a little Animal food but a moderate quantity only; this Regimen might be further illustrated by the difference of Animal food; which differs,

1. As it is more or less soluble in the Stomach.
2. As it gives more or less Stimulus to the System.
3. As it is more or less persperable.

Our chief security however is in the moderation of the quantity, and little depends on the quality. We should follow Cernaro's method of weight and quantity.

Some attention must likewise be paid to the Condimenta, the Seasons employed to our food. Acids are universally hurtful to Gouty people, hence all Pickles have the same injurious effect. With regard to the Aromatic seasoning it is not so easy to determine. — Dr

Dr Warner advises Aromatics and even Cayen pepper, but it is doubtful whether Aromatics do not destroy the tone of the Stomach. Before this I would prefer Mustard, Horse radish, Onion, &c, which are better than those of the torrid Zone as Mace, Pepper, Nutmeg &c.

These can be only necessary for persons that have been accustomed to them; but, where it is necessary to obviate the Inflammatory state by means of a vegetable diet, I maintain that it is very wrong to employ Aromatics, as it will render the use of vegetable diet of no effect. - Among other Condiments Salt has been generally recommended, and Warner mentions several instances of persons, living on Salt meat, being less liable to the Gout than those who lived on a low diet. I myself can not say whether it is useful or hurtful.

I now proceed to speak of the **Drink of** Gouty persons. This we refer to two classes.

1. Watery Liquors.

2. Fermented Liquors, or Spirits.

With regard to the use of Wine and fermented liquors the same question has been put as with low Diet, viz, whether it is safe for persons accustomed

accustomed to wine to abstain from it, and whether by so doing it will not be hurtful to the Gout? This depends much on the habit and state of the patient and on the time of life that he happens to be seized with the disease.

If wine be not drank to an intoxicating degree it is always less hurtful than meat, and hence a total abstinence from it is never so necessary. — In cases where it is doubted whether wine is proper or not, much will depend on the quality of the wine used.

— Wines that are liable to Acescency are much more hurtful thereby than they are useful by their Stimulus. There is a difference between the effects of Claret & Madeira, the former being apt to turn sour on the Stomach, the latter not.

A Gentleman of my acquaintance, who is liable to the Gout, has during the fit of it a degree of Nausea, which shews that the Gout is not sufficient to determine itself to the extremities. At any time of the Intervals, when he is free from the Gout, a single glass of Claret will bring on the same nausea that he feels when the disease is present; hence in Gouty persons the smaller bodied wines, as being the most Acescent are carefully to be avoided.

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The use of Spirits is a most dangerous practice and rises to a degree of Intemperance truly Atonic. Habit has great influence on our System and sudden changes are dangerous. Where a person has been in a habit of living on a full diet it is dangerous to change it, even tho' we do it slowly; for we can scarcely do it slowly enough. In most cases, I apprehend, the danger has not been so much owing to the low diet as to the bringing him too soon to that diet.

If a person with a view to obviate the Gout has taken to a low diet and continued it for some time, a return to full diet, especially if it be sudden, is extremely dangerous.

The writers on the Gout have maintained that the subjecting a patient to Milk diet for a year has cured the disease; but certainly the return from this to a fuller diet would be more fatal than before.

I now proceed to the use of **Exercise** in the Gout. This is proper & necessary to Gouty persons. A late Italian writer, when determining whether Exercise is healthful or not, says, Not; & brings many instances of Men's being healthy & arriving at a very great age, & says that more is to be expected from low diet than Exercise. But Exercise seems particularly suited to the human constitution. Man is born for action, and bodily exercise is as useful

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as it is natural to them. I know many instances of Sailors being much afflicted by the Gout, who at land were free from it; hence the Gestation was not sufficient to compensate for the Want of Bodily exercise. Riding is the best of Gestations, but fits of violent exercise will not answer; Tennis or Cricket will not answer the purpose, they are not durable, and, in proportion to their great excitement, they are liable to alternate collapse. The exercise of our labouring persons is the most proper, and it is the constancy of the exercise that has the chief effect. Exercise and labour, except joined to great moderation in diet, will have little effect. Many people in affluence take much exercise; yet, from indulging their appetites, it has no effect, on the contrary I say it is hurtful.

I knew a Gentleman with the Gout who used exercise, and even that of riding on horseback, yet could not refrain himself from eating the same food as usual. He soon came to find that his exercise, instead of being of service, was of disservice, serving to bring on his fit the sooner which occasioned him to leave it off. The reason he assigned for leaving off exercise was, that he found the exercise

Exercise only gave him a greater appetite, and his satisfying it always served to bring on the fit; hence a low diet ought always to be joined to Exercise.

Bodily exercise must be employed at the first attack of the disease; for, the extremities become so weak that afterwards upon the least exertion the patient is liable to a relapse. — A fit of the Gout may be walked off, and I knew a Gentleman who frequently avoided it in this way; but, at last, it, so far from obviating it, brought on the Gout; Exercise ought to be continued for a great length of time.

Lastly, if a person has entered on a course of Exercise and thereby obviated the Gout, it is extremely necessary for him to continue the same. I now proceed to speak of Sleep.

The state of Sleep ought to be carefully studied. The vulgar opinion is, that attention is only to be paid to its due proportion, not to the time in which it is taken; but Physicians know to the contrary. The reason is that the Bodies are liable to a diurnal Revolution, at one time they subside & again are renewed with vigour. The sanguiferous System is much affected, being much lower in Sleep than

than waking. We before traced the various revolutions of the Sanguiferous System in the course of the day. The attack of the Gout 9 times in 10 is at two o'clock in the morning, the nocturnal exacerbation of the Sanguiferous System. It has been therefore, perceived of consequence to Gouty persons to go early to Sleep. - Doubts have likewise arisen concerning the length of Sleep: Sydenham advises to be sparing of Sleep and to rise early; Boerhaave again advises *Somnus maturus longus*; this however must be diversified according to the state of the disease; but I believe Sydenham's advice is preferable; Very long Sleep increases the disposition to Plethora which we want to avoid.

3^d Indication is to Avoid all external Remote Causes inducing Atonia

Cold. This affects and weakens the tone of the vessels in the extremities. By Cold I do not mean a transitory, but a continued, application, such as destroys the tone of the System, especially the extremities, because they are further remote from the heart, and the Joints because they are less succulent and less defended by the subjacent parts. Cold however affects the whole external surface and

and every observation points out that the supporting of Perspiration and the action of extreme vessels is the best means for preventing the approach of the Gout.

The only time Arthritics are free is in the warmth of Summer, because the perspiration is then more duly kept up. - Cold is more immediately the exciting cause, because we perceive its other effects in the System. Catarrh often occasions Gout; hence we should avoid every application of Cold, and avoid it more especially as directly applied to the lower extremities, and it is necessary to support the action of the extreme vessels and the determination to the surface, and hence we should excite a free flow of perspiration and free circulation.

One of the means of doing this is by friction, which was a remedy much employed by the ancient practitioners. Sir William Temple said that no Man having a Slave ought to have the Gout, because he might constantly employ him in rubbing him; but the generality of people are too remiss in the application of this. Moderate friction should be used for a continued length of time, and, when this is done, very excellent effects have arose from it. The motion of the Joints, before torpid, were cured by

by it, and the approaching Paroxysm was prevented.

Warm Cloathing. This should be minutely regarded. In people that have once had an Atony of the extreme vessels they must always have recourse to warm cloathing, and flannel should be always used. A frequent change of cloathing ought to be used, for the flannel, by being constantly applied to the body, is less fitted to absorb the perspiration, and is therefore less warm.

Warm Bathing is an excellent Remedy, but I believe is seldom applied with propriety. The body perhaps from the heat of the bath is more susceptible to Cold, and the body, from the relaxation it induces, must afterwards be liable to considerable Collapse.

When the Atonic state has long prevailed, the warm Bath is of service in moderating the fits of the Gout.

Intemperance, I mean relative to drink or intoxication. Our love of Mirth and Jollity has produced many apologies for this intemperance. It is for the present practiced with impunity, but it is noxious to the Animal Economy and to Gouty persons in particular.

I knew a Physician, much addicted to the bottle,
who

who found that his indulgence of drink was only confined to certain seasons; if in the Spring he drank, he was certain of having the Gout; but, after that period till Autumn, saying, *Diffugere nubes redeunt jam gramina lampa*, he drank with Impunity.

Another of the Remote Causes is Excess of Venery. This certainly disposes to the Gout; it is difficult to demonstrate this, but, from it's being a powerful exciting cause, it is probably pernicious.

Intense Study. This should be avoided, and they should moderate their application by the Interposition of business. Gaming should be avoided; a Game of Chess I have known as pernicious as a metaphysical disquisition, and the anxious attention concerning the event renders it as pernicious to the body as any thing we are acquainted with.

Excess in the Passions, should be avoided as they are indirectly often the Causes of Debility. — This finishes the consideration of the different parts of Regimen as adapted to our several Indications.

Remedies.

Blood-letting. Sydenham condemns this as pernicious. Hoffman, on the other hand, recommends it.

it. As the Plethoric state is in Gouty persons, and bleeding induces this, we should be cautious of administering it; but when the Plethora is not of long standing, properly managed, and in the young and vigorous, particularly at the first attack, it may be serviceable; it must however be confined to these circumstances.

Dr Thomson published a treatise on the Gout, on which he says it is an Inflammatory disease, and ought to be treated by Bloodletting; but he does not attend to the Inflammatory state being a consequence of the debility, and his views are miserably confined. He was unable to execute his System in practice, and many cases occurred in which he was unable to use his favourite remedy Bleeding.

Purging. Sydenham declares this to be universally improper. Dr Martin Lister, his commentator, declares it to be absolutely necessary. I myself take the side of Sydenham. When we can obtain principles that discover how circumstances can impose so far upon men as to appear plausible, then we may conciliate the disagreement of facts. Thus if the system is full, purgatives can take off the prædisposition and obviate the fullness; but if no

no fullness appears they are absolutely improper. Though Purgatives in the first case are safe I doubt if they are absolutely necessary; for, though they take off the present Plethora, they do not obviate it. In the latter case they are absolutely inadmissible. With regard to the primæ viæ, however, as all cruditics in them or in the Stomach, and costiveness, tend to bring on the Gouty paroxysm, and where, with a suppression of the hæmorrhoidal flux, cruditics are joined, Purging, so far as to keep open the Alimentary Canal, is necessary.

The Gout seemingly is a disease made up of contradictory circumstances, for every thing that weakens the System is a means of bringing on the disease, yet there occurs in it an inflammatory reaction; which, as being the painful circumstance, is the chief object of the patient; hence we cannot employ any measures to increase this Inflammatory state. The great nicety then in the Cure of the Gout is to observe a Mean between the two extremes. But Physicians mostly run into one or other of the extremes. Thus some Physicians, in opposition to Dr Thomson, will hardly ever admit of Bleeding upon any occasion in the Gout. Some
times

times an Inflammatory state of Gout takes place in the Internal viscera, hence Bleeding is the only remedy to save the life of the patient. There are Inflammations happening in Gouty people, which require the Antiphlogistic Regimen in the highest degree.

It is true that, in atonic Gout, and even in other diseases with this diathesis, the patient cannot bear Bleeding as well as another would: but, if he be strong, and another disease, as Catarrh, comes on, then we may bleed as in other cases.

I now proceed to the other Evacuations which belong to our Second Indication, which is to support the general tone of the System.

Vomiting. This is applicable in Gout as it is so often ushered in by Atony and Debility in the Stomach, and by the production of various crudités and Acids, which last I said is capable of inducing a paroxysm of Gout by increasing that Atony of the Stomach to which it owes its rise, and therefore a Vomel, by cleansing the Stomach, may prevent a fit from coming on; it may too strengthen the Stomach - hence I have no doubt but Gouty people have their fits rendered less frequent

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frequent and less severe than otherwise, by vomiting.

But it has its limits, and if carried to excess it debilitates and weakens the tone of the Stomach. Large draughts of warm fluids poured into the Stomach weakens it. I think it is better to stimulate the Stomach with ten grains of Ipecacuanha than by throwing in several quarts of warm water or Chamomile Tea.

Vomiting has too a power of determining to the extreme vessels, by perspiration; by which means it may support the tone of the System and obviate the return of Gout. — Every means of determining to the surface of the body is liable to collapse in proportion to the former excitement; therefore the application of Cold afterwards must be avoided.

It is for this reason that Vomits are best administered in an Evening because the patient, by going to bed immediately afterwards, promotes the perspiration. — I have known some persons who had a hereditary taint of the Gout; and, by vomiting once a week or once a fortnight, have prevented the return of the Gout with any violence — have made the Fits slight and short. — This is then very

very useful in the Gout.

Sweating. Sydenham and Boerhaave, tho' they both declare against Bleeding, Purgings, & Vomiting, yet shew much favour to Sweating. As Sweating is always in consequence of a more vigorous determination to the extreme vessels it seems a more favourable evacuation than purging, yet as Sydenham himself observes, if it be urged with much heat and by Inflammatory medicines it does harm. It is however possible to conduct it so as to obviate either of these circumstances.

Sweating has been, by Sanctories, found to be a means of diminishing Perspiration, because it exposes the Extremities to a Collapse equal to the former excitement. It is therefore not only necessary that Sweating be excited with as little heat as possible, but also that that heat be not allowed suddenly to subside. But, however, we avoid the consequence of a Sweating fit, yet it is evident that Sweating cannot give that steady excitement of the extreme vessels so as to obviate the Gout and prove a radical cure. I would therefore reject the pretensions of all Empirics who pretend to cure the Gout by Sweating. As

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As Sweating, properly excited, may take off
Atonic Gout, so it may give a temporary relief,
that other means may be employed to procure a
more steady Excitement. Sweating under a particular
regulation has been found very serviceable, viz to
keep the patient in bed three or four hours in a
forenoon; then to give a moderate dose of Volatile
Alkali, and give besides a Decoction of Sarsaparil,
which is particularly directed to the lower extre-
mities by warm bottles, bed cloaths, and the Arms
being left out. This method pursued for several
days, and even Months, has been serviceable in
Chronic Gouts, where there are Chalky Concreti-
ons &c.

Sweating was used long before Boerhaave, but not
properly till his time. I knew a Gentleman, liable
to the Gout, who, however, never had a violent fit
of it, which I imputed to his lying a bed the whole
of the forenoon, whenever he had the least pain,
by drinking warm tea till a Sweat broke out; by
which means the pain was taken off.

I come now to speak of certain Medicines which
have been employed in the Gout; which I cannot
reduce to certain heads as I do not know how they
operate.

Alkaline

Alkaline Salts and Absorbent Earths.

These have been found very serviceable in Nephritic and Calculous cases. As there is so great a resemblance or affinity between the Gout and Nephritic cases we might infer that they would be serviceable in one because they are so in the other disorder; but we have in fact observed that as they relieve the Nephritic affections they also have the same effect on the Gout. — It is with me a question how they operate. It is impracticable that they operate on Calculus by dissolving it, since a long use of Absorbent Earths have the same effect as Alkalies. In both these cases perhaps their operation may be reduced to absorbing the Acid, but how this relieves Calculous cases I cannot say — but why it is of service in Gout is easy, for I said that Acids thrown into the Stomach may bring on fits of the Gout; hence obviating this Acid may prevent a fit. Dr Rusham says that the long continued use of Alkalies have bad effects on the System.

Bitters, a Remedy that has been used in the most antient times. See a paper of Clayton's in the first Volume of London Medical Essays for the

for the different Bitters employed. — They prevent all return of the Inflammatory state of the Gout, employed in the form of Portland's powder. They have this effect. It is possible, as in the case of the Duke of Portland, they have been employed without immediate bad consequences; but most commonly they are attended with pernicious and fatal effects. I knew ten or twelve persons who have died in three years after taking these powders, with Hydropic, Paralytic, or Apoplectic fits, depending on Serious effusions in the Brain. Now they prevent the return of Gout and have the effects I have mentioned is not clear in Theory; whether these bitters by exciting the tone of the Stomach too frequently and in too great degree, do not destroy the tone of it altogether, and throw it at last into an irrecoverable state of Atony, I will not determine: Or whether whilst they excite the tone of the System, they do not at last destroy it in consequence of a Narcotic power as they prove poison to many Animals. — They certainly occasion a loss of tone in the System, and hence the Hydropic effusions.

The same as I said of Bitters is applicable to other similar preparations as Bark, Tansy Tea, &c
J

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I think I have instances where the long continued use of Bark has had the same effect as Portland's powder. Hence, though these remedies prevent the return of the Gout, yet being frequently attended with fatal circumstances, it is sufficient to deter us from their use. The Gout depends on a debility of which is cured by the Inflammatory state, and if you take down this Inflammatory state you bring on a worse state of debility, and often kill the patient.

Even now there is another Remedy proposed by one Dr Le Fevre at Leige - he cures his patients by about thirty doses of a powder given out of his own hand. It is but two years since he first began this way, so that we cannot yet say what are the effects on the Systems of the people thus cured. We have now spoken of Remedies and Medicines that may be employed in the Intervals of the Gout and will render the fits less frequent and less violent.

We now proceed to the Remedies that are to be employed during the Paroxysm, comprehending all those used at the approach or when the fit is gone off.

J

If the approach of a fit be perceived, by Indigestion in the Stomach and Costiveness, it will be useful (useful) to cleanse the Stomach and evacuate the belly. We should cleanse the Stomach by a Stimulus that will operate on the whole System by determining to the surface and to the Extremities.

It is not enough to open the Belly by cooling laxatives before the fit is come on, but we may also employ the warmer spiritous Aromatics as Cathartics.

After the fit is come on, the Costiveness must be obviated by Glysters, and Laxatives of the most cooling kind. If Purgatives are employed I would not employ these heating purges that may be employed on the approach of the fit, but the mild laxatives. The belly must be kept open during the whole Paroxysm.

If the Stomach be affected with Nausea and indigestion &c, after a fit is come on, then Vomits are also useful, and this not only with a view to the Stomach itself, but, considering the Gout as a febrile disease, Tartar Emetic as we employ it in febrile cases is also useful in the Gout.

We must moderate the Inflammation of it when

when it runs too high, for frequently by running too high it weakens the tone of the parts and disposes them to a relapse. This we do by every part of the Antiphlogistic Regimen. Every person under 45 years of age is for the most part in a full and vigorous state; and if these have no Atonic Symptoms, then we may employ the Antiphlogistic Regimen in its utmost rigour, admitting neither of Anemial food nor wine. But if any Atonic Symptoms have come on, then a moderate light broth and wine may be allowed.

Bleeding may in the first of the above cases be employed, but must be confined to a recent disease in a young, full, and vigorous person.

Topical Bleeding, was an ancient practice, but they were timorous of it. Many moderns have recommended it. I have known it practiced with success; but I know not instances enough to establish general rules. In taking off suddenly the Inflammatory state other means which do this are dangerous; hence this may be so also.

One Rule may apply, viz. that we should follow the same rule here as in Rheumatism where it is needless to apply it till Redness and Swelling

Swelling of the external parts is come on, which serves to shew that the Inflammatory state is come to it's height.

The other Topical applications are

1. Emollients.
2. Refrigerants.
3. Narcotics.
4. Antispasmodics.
5. Rubefacientia.
6. Blistering.

All these have been employed without ill effects, but on the other hand all have been employed with consequences the most pernicious.

The Refrigerants and Narcotics are most certainly mischievous, and the others equally so. Whilst therefore the matter is so ambiguous we have no criterion of discerning when they are applicable; and hence this fluctuating state determines us, against their use. It is probable that the vessels of the Joints are in balance with the rest of the System, and therefore, when these vessels are affected with Atony, the contiguous parts must be more or less affected; and therefore the Inflammatory state which is conducive to remove this is highly necessary

necessary; if then we use such topical applications as are applicable to take off the Inflammation it will be felt in the neighbouring parts, and with bad consequences to the System in general. If these Anodyne applications are to be rejected, what are to be employed, and may Opium be internally used? — Physicians in general are of the contrary opinion, & even Sydenham, the great patron of Opium, declares that Necessity alone can occasion the use of Opium, and only when the pain is very violent. Vide Sydenham. —

I alledge the violence of pain is the strongest Objection to the use of Opium, for Opium aggravates Inflammation; of this I have seen frequent instances and the Advocates for Opium alledge it inadmissible till the Inflammatory state is removed; and when the fits are over they use it to moderate the succeeding Paroxysm. — I think it should never be employed till the Tumour is come on. It certainly weakens the System in too liberal an use, but its moderate exhibition may be serviceable. Strong liquors have been employed towards the end of the disease; but these, except in the interval, are highly pernicious. The different effects of

of Ardent Spirits &c, in this state, from that of ordinary health, are surprising, so that a person who is unable to bear the smallest quantity in the latter state shall in the former bear an immoderate quantity without being liable in intoxication. —

Exercise has been much recommended, but, when the disease is habitual, and the parts are under a degree of Infarction, it debilitates the System; this however is no objection to Sydenham's practice as he advises horse exercise. —

The Irregular and Atonic Gout.

I suppose there are two cases to be considered here.

1. Irregular,

2. Atonic Gout.

1. The first is when the Inflammatory state takes place in the Viscera not in the Joints, and produce Peripneumony, Pleurisy &c. It's arising from the Gout is the same with those Idiopathic Inflammations arising from other causes, and they are to be treated as such.

2. The Atonic Gout may be considered two ways.
First

First, as the Atonic state lays the foundation of the Gout, but differs as the Inflammatory state does not succeed. This state may appear by the Spasmodic state of every internal function. No one has mentioned how the Symptoms of the Stomach are marked as arising from the Gout or as arising from Hysteria or Hypochondriasis.

The most certain marks, but still less loose and uncertain, are an hereditary taint. There is no means of knowing when an Hypochondriasis depends on the Gout or otherwise.

The measures to be pursued are that,

1. The Cure is first to be obtained by removal to a warmer climate; we observe how much more frequent the Gouty affections are in winter, and hence we should be very careful of avoiding cold and have recourse to warm cloathing &c.

2. By carefully avoiding the causes of Atony, as Intemperate Study, excess of Venery, violent Emotions of the Mind &c.

3. Exercise, both bodily and by Gestation, attending to its being moderate, but constant; and hence as moderate airing will have no effect, they must be

be engaged in a long Journey.

4. Friction.

5. Warm Bathing. When the Atonic state considerably prevails it is admissible.

6. Moderate Sweating.

7. All means of preserving the tone of the Stomach, as Wines and Aromatics, should be used, but with the caution before mentioned.

8. We should avoid all Acids and particularly the Small Wines; and, in some cases, Wines should be avoided and Ardent Spirits diluted should be used.

9. The Alimentary Canal should be cleansed by Vomits and Purgatives, paying regard to the directions concerning these Medicines before laid down; and if great Acrescency prevails Alkalies may be employed.

10. By Medicines supporting the tone of the Stomach and perhaps that of the whole System.

— Here the practice is very extensive.

Bitters, Bark, &c, may be employed in moderate doses, but they are ambiguous.

Chalybeates are a principal remedy and are universally useful.

Lastly

Lastly, To remove the Atonic state we should imitate the Inflammatory state in the Extremities by Blisters and Issues. This I have seen practiced without success, and the last, I think, from their mode of operation, which consists in obviating Inflammation, are improper.

These then are the several Medicines employed for the Cure of the first state of Atonic Gout.

2^d. The second state of Atonic Gout, is when the Inflammatory state has taken place, but, suddenly ceasing, is followed by several affections of Intermitting Gout. Here commonly the symptoms are more sudden and more violent. As the tone of the system had been more or less excited by the Inflammatory state, so, in proportion to this, the sudden collapse in the Extremities will be violent, and perhaps fatal.

Or, from the determination to the Sensorium, Apoplexy &c, may be the consequence.

Cure.

The Volatile alkali as an immediate and strong Stimulus, either by itself or combined with Mustard, and

and the Antispasmodics are used; and Brandy,
which is immoderately drank, becomes Narcotic
and Antispasmodic.

Order III.

Exanthemata.

Order III. Exanthemata. 208

The character of this Order is "post-febrem Phlegmasia, &c."

There are many Inflammatory Cutaneous affections not belonging to the Exanthemata, and these where they are not the consequence, but rather the cause of Fever, and they do not therefore belong to this order, and thus we distinguish the Exanthemata from the pure Phlegmasia. The Pure Phlegmasia are at least congenial with the fever, whereas the Exanthemata only succeed in consequence of Fever preceding, which is the principal distinction.

This distinction however is by no means accurate, for proper Phlegmasia do not always appear as soon as the fever, and there are some Exanthemata that seem to arise with, and come before, the Fever; but these are uncommon, and if they are cases of Phlegmasia where Inflammation supervenes the fever, yet there are hardly any cases but where some symptoms of topical affection which founds the disease did not appear from the beginning. In every proper Phlegmasia the whole of the disease seems founded on topical affection, of which the fever is the effect.

Different from this is the Exanthematic Phlegmasia, for

for here the cause is generally dispersed over the whole system and produces fever, and that it becomes topical appears from the Eruptions.

In the Exanthemata the Fever is previous to the Eruption, and this is a topical following a general affection; but upon this view it is difficult to determine what are properly comprehended under this Order.

Of Exanthemata two different cases are to be distinguished.

1. Where there is a foreign matter introduced into the body always exciting a fever that has a certain and determined duration and is followed by an Eruption of a peculiar nature and determined duration; and, I will venture to add, that in such cases there is always more or less of Eruption produced. I add this because Sydenham has said there were Fevers without Variolæ; but from long experience I am inclined to contradict this, and I believe no instance can be brought of a *Febris morbillosa* without Eruption. It may be said then that in this case there is constantly more or less of Eruption.

2. When there is no specific contagion, but from the disease being communicated it becomes Sporadic,
as

as the Erysipelas; Or, if the disease is contagious it does not produce an eruption, or at least an eruption of a determined kind. Erysipelas seems to depend on a certain state of the fever, and perhaps on certain accidental circumstances on the surface of the body and not necessarily determined by the nature of the matter; and hence the eruption is not constant. The Petechiae have been ranked among the Exanthemata, but the fever is of no determined duration and the eruptions are not uniform, breaking out at very different times and never regular. These also frequently occur without a fever, and the appearance is not determined by any duration of Fever. They never occur but from previous sweat. Many people have them in consequence of Sweating, hence they depend on accidental circumstances of fever, and a different state of the skin in certain persons.

The first case I would only call the proper Idiopathic Exanthemata; the other I would call Febris. In the first a foreign matter is introduced that is determined to eruption. The other has a foreign matter, but only tends to produce Fever, and the eruption does not govern the disease

disease so as to determine the course, or much less the form of the Fever.

Of these Exanthemata which are most certainly of the Idiopathic kind, they are peculiar in affecting one person only once in life. Whether this is universally applicable, or that we may deny such to be proper Exanthemata that are not attended with this circumstance, I cannot determine.

The Genera are to be distinguished,

1. By the nature of the Fever excited; whether it be Typhus, Synocha, or the Combination of these, the Synochus. Under every Genus I have in my Synopsis put down the fever generally attending it; yet though some of the Exanthemata are steady and constant in always giving a Typhus or Synochus, others, however, are not so, hence it is not perfectly a characteristic.

2. The several Genera are much more certainly characterized by the particular duration of Fever, and by the period of Eruption. There is some latitude here, but take a number of cases and a great uniformity will be found.

3. Exanthemata depend on a particular matter which produces them in consequence of a particular determination

determination; the Genera are distinguished in consequence of that determination. The most general case is a determination to the skin, which we say depends on a foreign matter, liable to be joined by the Sacrementitious fluids, the matter of Perspiration, and hence carried to the skin; but a determination to the Mucous glands generally accompanies Leanthemata. It is from the affection of Perspiration and the matter of the Mucous glands, and there is a strong presumption in some species that there is, an affinity even between the Perspiration and Mucous itself.

4. Is the determination to the Lymphatic glands, whence the Pubo and Parotis: What it is founded on is difficult to determine. It is a matter of peculiar abundance generally passing by the Organs of perspiration; but, from its great abundance it is generally poured out by the exhalent vessels, in consequence of which it is absorbed and stagnates in some of the glands.

5. The Leanthemata are distinguished by the nature of the Eruption, which may be of three kinds;

1.st A serous fluid commonly changed into Pus.

2.^d A more serous fluid not disposed to be thus changed into pus, but remaining fluid in the form of Serum.

3.^d A matter hardly appearing in a fluid form, but appears only in a quantity of matter, pulling on a dry form, and throwing off a scaly purpuraceous matter.

6. The Exanthemata are distinguished by the different parts of the body which they occupy; thus Erysipelas attacks only one part, hence called by Linnæus "Solitary." Others attack all parts of the body indifferently, but the face most. The miliary eruption, on the contrary, attacks every part except the face.

I now proceed to consider the several Genera.

Erysipelas

Erysipelas.

Its character as a topical affection I before considered: from the character of this with a topical affection you will see the propriety of my comprehending it; and the Diagnosis of Erysipelas will be evident.

This is of different *Species*.

1. As confined to the *Orbita Mucosum*.

2. As there is more or less of Phlegmon under the subjacent Cutis; and thus combined we observe that the phlegmon only appears in the Legs, never perhaps in the face. The species of Phlegmon differ by their axils,

1.st Some shew no evident issue or collection, & go off in desquamation, and in those of the furfuraceous kind

2.^d Where it is attended with collections in very small sachs, what are called *Phlyctena*.

3.^d Or in very large vesicles and are called *Blisters*. — The chief difference that arises between these is from the fever, which is either *Synocha* or *Typhus*, as in the appearance of *Anthrax* and *Carbuncle*. The topical affection frequently

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* A case of Erysipelas is where the Erysipelas does not come on upon fever, but the fever follows the eruption; here it is certainly a Phlegmasia and not an Ecanthematia.

frequently occurs without, but more frequently with, fever; but with this circumstance that often the Erysipelas supervenes upon the fever, and frequently too the fever supervenes on the previous Erysipelas*. This last amounts to a very different view of the Erysipelas, viz, that it is not an *Idiopathic* but truly a proper *Phlegmasia*. In a late case the eruption subsisted ten days without a fever; at length a fever came on with horror &c.

The Erysipelas commonly is not a contagious disease, and for the most part is purely *Sporadic*. This will give us a doubt whether it is to be considered as the *Protyphus* *Eranthemalicon* of *Senacius*. I am not ready to determine this. What are the circumstances of the Erysipelas *pestilens* I am unacquainted with. The Erysipelas *pestilens* appears more probably to have been symptomatic of fever; but perhaps if history was better known they might be different.

Every Erysipelas I have met with shews marks of the *Phlegmasia*, by it's being a topical affection, by it's having the *Inflammatory* fever, and from it's having blood with a crust so as to require bleeding.

It is liable to creep over the skin, which gives considerable difficulty, and is the most remarkable distinction, which is a circumstance in which it differs from the Phlegmon. This depends on the Plebs Muscosum giving a certain coadation that occasions the spreading, and any dry application prevents this. The Erysipelas is supposed to differ from the phlegmon in its mobility; but I have seen no instance of such translation as this mobility is supposed to infer. If they are truly genuine translations or what truly happens to Phlegmon, that one day they are determined to one place, next to the other; and as in Rheumatism it is never vehement in two joints at the same time, I doubt whether this is a translation or only a communication of Inflammation.

While the Erysipelas affects the face the Inflammation is liable to be determined from the external skin to the Membranes of the brain; here there is no translation, only the communication between the external and internal carotids; and I never saw an instance of the internal parts being affected but the external and internal affection of the carotids took place and subsisted at the same time.

(Cure)

Erysipelas

Cure.

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There may be supposed two cases of Erysipelas; one where the Inflammatory state is the effect of fever considered peculiarly as this, and without a particular matter determining to the Eruption; hence giving Febris cum Ecanthemat.

2. It is of a topical Inflammation.

As to the Cure of the first regard must chiefly be had to the fever. I presume the fever is always of the ~~peccid~~ ^{inflammatory} ~~or nervous~~ kind, properly a ~~typhus~~ ^{typhoid}, and the Cure must be directed accordingly.

We consider Erysipelas then as a Phlegmasia, and we treat it by the Antiphlogistic Regimen and by Bloodletting, analogous to the Cure of other Phlegmasia.

The Erysipelas is so far from being an Ecanthemat, which would infer that a fever is necessary to the Eruption, and on the approach of which the fever ceases; but I have told you of cases where the fever supervenes on the Eruption, and continues with it as with other topical Inflammations; hence Bleeding is equally necessary throughout the whole course of the disease in proportion to the fever.

Bleeding

Erysipelas

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Bleeding has been discouraged in ^{Erysipelas} ~~Erysipelas~~, & the doctrine rejecting this is extremely pernicious. I, from experience, can assert Bleeding to be as useful at the fourth or fifth day of the disease, as before the Eruption; we must therefore treat it as a topical affection.

As Erysipelas is an external disease it admits of Topical Applications. These have been various, as

1. Narcotic.
2. Refrigerant.
3. Spiritous, or Acid; and
4. Emollient.

All these have been employed and objected to. The Narcotic and Refrigerants, or Opium and Saccharum Saturni, have been alledged to dispose to Gangrenous affection. — The Spiritous and Acid are commonly found to increase the Inflammation, & spread the Inflammation. These Objections I believe are pretty well founded; hence these are universally pernicious.

The most proper applications are the dry; as powdered

powdered Chalk or the different farinaceous matters. Both answer the purpose; but the Chalk, uniting with the moisture on the surface, is liable to concrete into a hard mass; hence I would give the preference to the Meals, and to the coarser kinds of these, as Catmeal for instance. — In some parts of England they apply Colewort leaves: These we know occasion a considerable exudation, and we should presume they would occasion the spreading of the Inflammation; but the effect is found to be the contrary. —

Pestis

Pestis.

This disease is seldom the object of our practice, and is therefore commonly neglected in the studies of young persons; but it undoubtedly deserves to be studied. I must leave you to consult the writers upon this disease for a large detail of facts.

The first question to be considered is, whether the Pestis is a disease different from all others in species, or only in degree? This is a question of consequence. It is true there are fevers approaching to the true Plague in Malignity and Fatality; and hence the term Pestilential has been employed in a vague and undeterminate manner. Buboes, Carbuncles, and Petechiae, have been found to attend other fevers, and hence I think it differs from others more in the violence of its cause than in any difference of character. However warm the Climate, and however violent the symptoms of putrefaction may be, this disease never arises but where we can trace it as arising from Contagion, and it always exhibits certain peculiar symptoms. In the East and West Indies the
true

true Plague never appears.

A disease appearing with such Symptoms is Endemic in Egypt and in most places of the Levant. It is not only from the state of heat producing Putrefaction, but from a ferment breaking out. We can in every part of the world trace it imported from this corner and hence it may be justly called a new genus of disease.

A 2^d question is, As a specific disease how is it distinguished, and is it properly an Exanthematic disease?

It is agreed that there is no certain mark of the presence of the true Plague but from the presence of Buboes, Carbuncles &c.; and upon this very character of this disease in the Synopsis is founded; for, though it appears in an Endemic plague that persons die without these eruptions, yet no one will ascertain it to be the plague unless in others affected these tumours appear.

The presence therefore of Buboes and Carbuncles will give us a diagnosis of the true Plague.

Whether is the disease to be considered as Exanthematic? The Carbuncles can alone be esteemed Exanthematic. The Buboes are not, and as they are

are not a determination, from the centre to the circumference, to the surface of the skin, as in Ecthymata. I cannot conceive that the matter deposited in the Gland is deposited from the extremities of the blood vessels of that gland; we have more reason to believe the matter is brought to the Gland by the Lymphatics. This infers a matter diffused over the system, disposed to be effused by the extreme vessels into the cellular texture; and we often in the virulence of the disease find it poured into the cellular texture and several of the internal viscera; hence I cannot consider Buboes as Ecthymatic.

The Carbuncles I consider as Symptoms of a more violent disease; their number is but few, seldom above twelve are to be seen. The disease therefore is not to be considered as Ecthymatic, for in the proper Ecthymata the eruption observes a determined period, but in the Plague, it is different; hence I have added in my character "incerto morbi die."

I have let it remain among the Ecthymata because it bears a strong relation to them.

A 3^d question is, whether or not the Plague is contagious? This I shall shortly touch: The question

question seems absurd and ridiculous. You will find the controversy discussed in a Collection of tracts published by Chiconneau, and afterwards revised and corrected by Mr Senac.

It is often difficult to ascert the particular Contagion producing this disease, and difficult to trace its progress, and it seems often to arise without any communication known to us; but there are only negative facts, and cannot be opposed to the direct proofs of Contagions. No writer refuses but it may be propagated by contagion, they only say that it may occur without it.

There is a circumstance attending it, viz. We should oppose the vulgar notion that it depends on the general state of the Air; but it is never diffused in the Air nor is never extended to a sensible distance from its proper fomes. A line of circumvallation will as certainly confine a plague as a Benfold a flock of Sheep.

The contagion is only active as it arises from the body of persons infected, or from the cloaths, about which it permanently adheres; but the lodged Contagion never reaches to any sensible distance. History informs us of the burning the infected

infected garments, the wind blowing towards a town infected the Inhabitants.

However certain it is that the disease depends always on Contagion, yet such a contagion is, not always sufficient to produce the disease, and perhaps never without the concurrence of other causes. This has given rise to a singular opinion that these causes alone produce the disease, or, that it can be produced by Fear. Rivierius, in his account of the plague at Seipais, mentions many instances of its being produced by fear, and aims at establishing this the universal cause of it. This however is totally groundless: Fear is a strong concurrent but far from the occasional cause.

Of the Nature of the Plague.

The Contagion acts on the Nervous System, and at the same time on the Mass of fluids. It is also of so sedative a nature as sometimes to destroy the Mobility of the Nervous power and occasion Death. In other cases it admits of some degree of reaction and a fever comes on; but this fever is a Typhus, attended with all the Symptoms of debility of Mind and Body - Dispair &c. Jh

It has a singular power in destroying the activity and tone of the moving fibres. The heart is considerably enlarged, the Arteries every where relaxed and distended, very considerable abdominal congestions in consequence of the blood not being propelled with it's usual force, and the vessels being relaxed give occasion to congestions in the brain and different parts.

The ferment is often so multiplied as to infect the whole fluids, the blood loses it's adhesion, which with the concurrence of laxity, the Exhalants pour it out, and it is deposited in the Lymphatic Glands. The matter directed to the surface is effused into the Cellular Substance and produces Carbuncles. - This dissolution of the fluids concurring with the relaxation gives occasion to Ecthima and to the effusion of the fluids in the external and internal parts.

In all these cases Death comes on with Symptoms of great debility, and the effusions putrefy and Sphacelus and Gangrene succeed.

There are three Species of Plague which can be distinctly marked.

1. Where the contagion is of the most violent kind. This is the Pestis Interna of Sauvages. 2. Where

2. Where the power and virulency of the Contagion is more moderate, and therefore admits of a reaction. This comprehends the 2^d, 3^d, and 4th Cases of the French Physicians; all of which Sauvages comprehends under one, by the name of Pestis, Vulgaris.

3. Where the Contagion is mild and hardly capable of acting on the Nervous System & occasions little reaction, but at the same time it affects the consistence of the fluids. This makes the 5th Case of the French Physicians or the Pestis Benigna of Sauvages.

Cheneau has marked seven states of the Plague, but these different states differ only in degree and even but in a slight degree.

Prognosis.

Whoever understands the general doctrine of Prognosis in Fevers will find it of general application here. What has been delivered by writers, as Cheneau, is sufficient.

Cure.

The practice is involved in difficulties, because Physicians will form absolute rules where there is hardly a foundation for even general ones. The

The plague is a disease of considerable variety. - I shall mention the principal remedies that have been employed, and shall just touch on the prevalent disputes.

Indications are,

1. To restore the determination to the surface, taking off the atony from the extreme vessels. This is to be done by Emetics, Sudorifics and Neutrals.
 2. To remove congestions in the Abdominal viscera, to obviate the effects of these in effusions of Bile &c. This is to be done by moderate Laxatives.
 3. To obviate the debility of the System by Tonics and Stimulants.
 4. To obviate the putrescency to which there is here an uncommon degree of tendency, by Acids & neutrals, or by Tonics. - Perhaps we may add another Indication, viz,
 5. To take off Spasm from the extreme vessels by Blisters and Issues.
 6. To obviate Inflammatory Spasm, which sometimes occurs, by Bleeding.
- Lastly. It also requires a particular management with respect to Buboes and Carbuncles &c.
- The

The Plague has never yet fallen into very experienced hands, and from this, and our new invented Remedies, with ^{which} they were unacquainted ~~with~~, I would form a more favourable prognosis than they have done.

The Abony of the extreme vessels and Spasms in consequence, is to be obviated by Emetics to be used on the first perception of any attack of the disease. We have numerous instances of Spasm gaining force by its permanency, hence the excellence of an early administration of Emetics.

It is common for the first attack of the plague to be accompanied with violent Vomiting, and hence it is a question if in such a case Emetics are advisable; but I have found the Spontaneous Vomiting not sufficient to determine to the surface, hence we must have recourse to Medicines for that purpose. But whether, when the Cold fit is passed and the hot fit already formed, is it allowable to give Emetics? When the symptoms of the disease are those of the first class, a great degree of Cold, without shivering and horror, and other symptoms of debility as flashings of heat and efforts towards fever; in this case many
effusions

effusions of Blood were found in the internal viscera, and here an Emetic might be fatal, and when the Symptoms are so violent they are dangerous. But when the disease is more moderate and of the second class they are advisable.

Every analogy in the case of Fever leads to the use of Emetics in the Plague; from full Vomiting to the Nauseating doses.

2^d Remedy is Sudorifics. These have been hitherto universally practiced, but not without objections; When effusions prevail they are pernicious, as every increased impetus of the blood may hurry on these effusions with the same fatal effect.

The objections that have been made against Sudorifics have arisen from the manner of their administration; those of the Acid kind have been employed; Opium, with the warmer Anastics - but, independent of the Remedies employed, if they have been conducted with great heat it is highly pernicious. Cullen was so sensible of the bad effects of producing Sweat that he only advises a Diapnoe, which is a very moderate perspiration. This temperature is very difficult to observe

observe; I imagine indeed many have been actually cured by sweat; it should however, from the introduction of Dover's Powder, be more readily used than formerly.

The old practitioners in the plague had a precarious practice, as they employed interpolating sweats only for three or four hours, and repeated it at different intervals; but one sweat, continued a long time, without great heat and stimulus, is much more effectual. Dr Sydenham expressly enjoins that the sweat should be continued for 24 hours. I think it probable where the dyspnoea can be supported for sufficient time it may answer the purpose; but this it is difficult to do. The mild Aromatics with vinegar may answer, but not with so much certainty. The use of the Saline draught may be tolerably efficacious for this.

Indication 2.^d To remove the Abdominal Congestions by moderate Laxatives.

In the dissection of persons dying of the plague the Spleen and liver were found to be very large, and great effusions of bile were observable. — The Physicians in the late plague at Mar-
seilles

scilles employed these laxatives with ^{very} good effects. The only objections lie against strong Purgatives and not against moderate ones. It is of the utmost consequence to restore the determination to the surface, and as Purgatives may be supposed to withdraw this, they may be esteemed pernicious; but a moderate use or two or three stools a day cannot influence the determination. If you urge sweat or an increased impetus of the blood you are in danger of forcing the Abdominal congestions to incurable effusions; hence at the same time we should obviate such congestions by keeping the body open, hence the utility of combining Purgatives with Sudorifics.

Indication 3^d. To obviate Debility by Tonics &

Stimulants.—

The Modern practice has received an improvement by the discovery of the Bark. Its use I have mentioned in Typhi. In the Plague it is employed, but never yet in sufficient quantity. The debility of the System is to be obviated by Tonics and Stimulants; the latter of which may contribute to support the tone of the System, and the use of Wine is here preferable to all others. — Now
far

far cold water may be used we have no Experiments to say.

Indication 4.th To obviate the putridity of the system by Acids and Neutrals. This being treated of before when on fever, I shall omit any farther discussion.

Indication 5.th To take off Spasm of the extreme vessels by Blisters & Issues. Physicians have on the continent been so little acquainted with the true use of Blisters that we can gain little from their observations. I have added a remedy still more uncertain and ~~un~~noticed, viz Issues. An incision was frequently made in the thigh, in which black hellebore was put. The pain was excruciating, but always attended with good effects. The benefit I take merely to arise from the Issue and from the good effects of a friendly suppuration of Buboes, it is highly probable Issues may be advantageous.

Indication 6.th To obviate Inflammatory Spasm by means of Bleeding.

Some cases of the Plague have no reaction, others again have a pretty considerable one, and perhaps begin with a Synochus, though the Fever of the Plague is properly Typhus, and

and hence Bleeding may be used. But I think the Genus of the disease is not favourable to Bloodletting, and if it is administered it must be only on few occasions. The Sedative power is so liable to prevail that the utmost delicacy should be used in a disease which is founded on the strongest symptoms of debility.

Indication 7th The Management of the Buboes and Carbuncles.

I find here I am engaged to give you a singular doctrine, contrary to the common opinion, but it leads to no errors in practice. I say,

1. That the common opinion of the Buboes and Carbuncles in the plague having been a chief means of discharging the morbid matter is hardly admissible; even in many patients in whom Buboes arise, they recover without such Buboes being opened, hence it is not necessary to evacuate the morbid matter in this way for the recovery of the patient, and we have an analogy in Venereal Buboes.

2. When Buboes arise and suppurate they are unequal to the effect of evacuating the morbid matter. Ceneau says, seldom do more than three

three tumours arise, which are unequal to such evacuation.

The same objections hold to Carbuncles; nor are the pustules in the small pox the sole Issues, to morbid matter as we shall say hereafter. Nor am I singular in supposing, Buboës and Carbuncles, when they suppurate, evacuate only a small portion of the morbid matter, as Mr Chenot observes this in two Aphorisms on this subject. Thus the tumors of which we speak are not the sole Issues, for we cannot conceive a matter, diffused over the whole mass again collected into a single tumour as is often the case. Nor have Systematics who have embraced this opinion endeavoured to show how it happens. The matter cannot be brought in a lymphatic gland but by absorption. Hence Buboës and Carbuncles are not critical but symptomatic only, and as symptomatic they express the state of the disease but are by no means the cause of it. Yet the Inflammation of a Buboë like other topical Inflammations and Abscesses in other fevers, tends to take off the fever of the plague, and like the Issues mentioned yesterday.

O

I proceed now to speak of the Management of Buboes and Carbuncles. — Chenot thinks Carbuncles are to be treated exactly the same as those arising from any other cause in a gangrenous state or with such a tendency, by Scarification &c; in which opinion all practitioners concur. — Buboes he thinks are to be left entirely to their own course, except some application to bring them forward, and then to open them as soon as they have matter. The practitioners immediately preceding him, viz. the French at the Plague of Marseilles, applied Caustics before they were ripe, and when opened applied applications to promote a suppuration. Experience must determine this. With regard to this I say that if the affair be put upon the Evacuation of the Morbific matter, the great industry of the French in cutting them out was ill judged; yet I must observe on the other hand, that Buboes often at their basis have a gangrenous tendency, though they do not appear so externally, and therefore if Caustics &c; are found, upon trial, to tend to their suppuration, they should certainly be employed.

Prophylaxis

Prophylaxis of the Plague.

This is so large a subject that I cannot here enter upon it fully. It turns on three points.

As it is a disease belonging to a certain corner of the world and always appears as imported therefrom, we must,

1. Prevent this importation.
2. Prevent its spreading when it is imported.
3. How its effects of contagion are to be avoided by the persons exposed to it when it does spread.

The two first are articles of public policy, but cannot be properly conducted without the assistance of the Physicians and Naturalists. See what happened to the French, in a book compiled by Mr De Senne, *De la peste*. Dr Mead has given a plan better calculated for a free state. Chenot gives useful additions.

The principal management depends on preventing the communication of goods and persons. The last is very difficult and much of this rigour may be relaxed; there are means of knowing when a person is free from contagion &c. See Chenot on this subject.

3.^d Article is the preventing the effects of the Contagion.

1. It turns on the knowledge of the Nature of Contagion and the means by which it is propagated.

2. The knowledge of those Occasional Causes that excite its activity and give it force.

First. We have learned much from Dr. Lind & Pringle on this subject; wherefore I refer you to them for this head.

Second. When on fever in general, I delivered this fully; and for this I refer you to what I said before. You will find that the whole turns on the two considerations I just mentioned. I say that there is no Antidote against the plague; yet I would not be understood by this to say that there are no means of putting the body in a way so as to be able better to resist Contagion. In general it depends on the Integrity and Vigour of the System, and therefore Cold Bathing, Bark, and Wine are of service.

I do not know whether Cold Bathing has been used; but, if we consider its effects in making us resist other Contagions, it may be inferred to be useful here.

Wine

Wine. Those that take Wine in times of publick contagion escape better than those who live on water: But only a very moderate use is here admissible. As to the Theory of Wine in this disease I am not clear, It does not seem to act solely by invigorating the System, because it was observed that even the better sort of people who never drank it escaped the disease. Opium and Wine is Atonic with respect to the System, and takes off the mobility of the System for a time. Wine in a moderate degree, may give the tonic without the debilitating effects that arise from Intemperance.

Bark. As it is a means of restoring the tone, so it is capable of supporting the tone and vigour of the System. If it is not sufficiently powerful to resist the Contagion, as it can promote the Inflammatory Diathesis, if the Contagion be introduced it may make it more mischievous. It should be pushed by experiment farther than at present.

Variola

At the confluent on the third day. —

Variola.

This is an important subject and of late has undergone much discussion; a proof that the doctrine is as yet unsettled.

The Character admits of no difficulty and requires little or no discussion; yet is a subject in which our nosologists have been very defective.

I shall only observe that by "tertio die," being made by me absolute it contradicts Sydenham who says the distinct kind comes out on the fourth day. I have in 1000 Instances seen it always come out in the course of the third day.

For an *Historia Morbi* I refer you to Sydenham. I am to confine myself to a distinct point, by which I hope to explain the nature of the disease more accurately.

I say the Small Pox arises from Contagion, a specific Contagion most exactly defined and characterized. Nothing is more probable than that this Contagion may be in different degrees of force, virulence, and duration. Such difference
in

in a certain degree does take place; but this is not the whole of the matter. It has commonly but a small share, and other circumstances give the difference of the disease. The referring much to the different degrees of Contagion makes us anxious on a subject which is not within our power, and makes us perhaps neglect what is. We now know that with the same matter taken from the same pustule in twelve people the Small pox shall be different in each; hence little is to be put on the nature of the Contagion; but other circumstances direct and modify it.

Though the Small pox has been divided into many varieties &c, there are but two kinds, one Distinct, the other the Confluent.

They are distinguished, 1.st By the form of the Pustules
2.nd By the State of the fever: in the distinct always going off on the eruption; in the confluent kind still remaining through the disease.

3.rd By the state of the Suppuration; in one case, viz, the distinct, being changed into perfect Pus; in the other hardly putting on the

the form of Pus.

1st By the number of the Pustules. In the distinct they are mostly few; in the confluent very numerous. Confluent Small pox never happens when the Pustules are few in number. — The whole of the causes determining to a greater number are the same as will be found to be the causes that distinguish the two different states of the disease. If therefore we find the cause of the confluent kind we shall then find the other differences from the distinct kind. — Here, as in the plague, most of the morbid matter passes off by the insensible perspiration, and hence the number of Pustules should depend on the circumstances favouring or diminishing perspiration.

When a ferment is thrown into a fermentable matter it extends over the whole. There is the strictest analogy in Small pox and plague &c, with this analogy of fermentation. The Confluent requires no longer time than the distinct. The quantity of matter produced is nearly the same in all persons, it extending

to all fermentable matter; but when there are only six or seven pustules we say the rest has passed off by perspiration, when a great number they have remained stopped on the skin and undergone fermentation. This matter is affected by circumstances of the skin, such as will occasion a free passage of perspiration or diminish it: hence heat applied will occasion a greater number of pustules; thus children, that lie more on one side than the other, have that side on which they lie more thick than the other. Dr Baker gives us an instance of a person, that lay before the fire, having the side next the fire very thick, the other free. I saw an instance of this myself in the case of a Smith, who lay, when ill of this disease, in a room adjoining to his forge; the consequences of which was that the side of his body next to the forge was very thick of pustules while the other side was not. In proof of this, when the heating and sudorific practice was in use, the confluent kind was more common than now. The same may be said of many Military Eruptions, where I have seen the Eruption confined to the parts of the body

body wrapt up with flannel.

In the Small pox if a part be covered with a sticking plaister it will be very thick set with pustules underneath, which is another proof of the same. There can then be no doubt of the number of Pustules in the Small pox being connected with particular circumstances of the skin, so that whatever makes the matter, which should have been passed off by Perspiration, be retained in the skin, will increase the number of Pustules.

The number likewise depends on the Phlogistic Diathesis in the System, in proportion as that is greater so will likewise the number be. This is fully proved by an Observation of Dr Winttringham, who observes that at those seasons of the year in which Inflammatory diseases are more frequent, the Small pox will be more frequently of the confluent kind. I say therefore, that, independent of Contagion, the number of the pustules depends on the System being more or less disposed to Phlogistic Diathesis.

External causes likewise give a more confluent Small pox.

1. Fear. — 2. Cold. — 3. Intemperance.

From

From the whole then you will perceive that many circumstances concur to modify the effects of Contagion, and particularly the number of pustules; and I say that a great number of the pustules are produced by the matter, which should have passed off by perspiration, being hurried to the skin by the phlogistic Diathesis, whilst a stronger Spasm of the extreme vessels and circumstances in the skin prevent it from passing off that way.

The circumstances likewise that determine the nature of the fever will give a different state of effusion and consequent suppuration.

The practice consists of two parts.

1. Certain measures to render the disease of a more mild and benign kind.

2. To conduct it after the disease is begun, whatever its condition be.

First is the practice of Inoculation. — Its benefits and utility is established on a very large Experience.

Where its advantages arise is not agreed. I propose to discuss the matter in order to ascertain the most proper practice as it admits of variety.

1st What has been much spoke of is the choice of Matter, as from a sound person, and of a mild kind. From what I said before, that other circumstances have the greatest share in determining the effect of the kind, this should be of little consequence, and many disregard the choice; but we cannot say a priori that there is no choice; nay I will say that a difference of matter has a share. I said the effluvia of the human body in its healthy condition is innocent, nay salutary in many cases; but that same effluvia if accumulated or retained in cloths or other matters can become a most noxious poison, producing even the local fever. Hence I presume that even the Effluvia of ^{pestilence} from countries under the disease by being retained may acquire greater virulence. — Most Epidemics are introduced by a fomes lodged in the matters which the human body had formerly communicated, and all Epidemics are more violent at first than afterwards, because in the first case they arise from a fomes accumulated to a great degree of virulence; in the second they arise by Effluvia from the human body. Of this we have many instances, in the plague at

at Marseilles, and of the noted Goad fever in 1750 at the Old Bailey, where, of the persons that caught the infection in court, only two or three recovered, but the infection was mild as arising from these last. No person was affected from them Sir James Pringle says: Hence I say infections are milder as immediately arising from the bodies of persons than taken from a fomes.

This applies exactly to Small pox, for Inoculation is taken from a person under the disease; the Small pox in the other way is propagated by a fomes, and this then is a reason why a regard ought to be paid to the choice of matter. Is there any difference in taking the matter from a ripe or from the unripe pustules? The presumption is in favour of the last, as it is more mild, and more fluid; therefore more apt to propagate the infection. When the matter is kept a long time, close corked in a vial, it is in a dry state, so cannot proceed to a greater degree of fermentation, nor give more virulent matter, as is the case with the Infection propagated in clothes &c, where circumstances of moisture &c also occur.

2.^d Another advantage supposed to be here derived

derived is from the small quantity of matter introduced; but in general the matter introduced is very small; and even when it has been introduced in different parts of the body it had not more malignity nor were the pustules more numerous than otherwise. I conclude it too from analogy of fermented liquors, where, though the ferment be considerably great, it makes no odds in the liquor; it is precisely the same as where a smaller quantity is put in. This therefore seems to make no difference.

A 3.^d Advantage is the Choice of the Persons, with respect

1. To their Age; And
2. The state of the health in general.

Age. An opinion has prevailed of the safety of this practice on Infants more than Adults, of which there is a presumption from Reason and Experience.

Reason; because not exposed to Phlogistic Diathesis, and not so much liable to other Inflammatory diseases as Adults are.

Experience; because the Confluent small pox happens more frequently to Adults than Children. — Later

Later Experience has however shown that the
Innoculation is safe in Adults. It is certainly
always preferable in Children; but we have gone
to extremes and preferred Children at the breast
before seven months old, because this is the peri-
od of Dentition. It is true it puts Children out
of the reach of the common infection; but it is the
only advantage, and has many disadvantages.
These children are more sensible and irritable, &
hence the Contagion of Small pox is liable to
produce Convulsions. It is true this ushers in
often a mild kind of Small pox, but I say the
greatest number of Children who have died, have
died in Convulsions. I would therefore prefer
Children after Teething is quite finished.

Another objection is, that we wrap up Children
in common too warm for the Small pox, as in
cradles, swaddling cloaths &c. which are unfa-
vourable circumstances. When Children by Inno-
culation have the Small pox numerous, the pus-
tules sometimes stop up their Nostrils, which
hinders them from sucking, and thus they are
starved. If therefore we practice Innoculation
on them we should take care that they be ac-
customed

accustomed to drink from a Spoon, Boat &c. The present practitioners therefore very properly prefer Children of two years old.

We are now to consider the Choice with regard to the general state of Health.

The Contagion may frequently fall upon persons in a morbid state, and Inoculation even only for avoiding such a state must have particular advantages. When persons are under the suspicion of a bad habit of body or labouring under some latent disease, it becomes a question whether in such a case Inoculation is safe? It is difficult to instance particular cases, and neither Experience nor observation have ascertained when we are to disregard the Valetudinary state; this is as yet a circumstance to be ascertained. - In times of a public Contagion, even in doubtful states of health, it is better always to practice Inoculation. In Greenock (the west of Scotland) the Small pox was so ripe that hardly one out of ten escaped, but on Inoculation being introduced all recovered. This then is strongly in favour of Inoculation in case of an Epidemic Small pox.

A certain state of the body may be doubtful for

for *Innoculation*. A *Scrophulous* habit for instance has been objected to. The mere suspicion of this habit affords no objection to *Innoculation*, and from Experience I assert that *Scrophulous* habits as often escape as any others; hence the *Scrophula* supposed to be latent in a family is no objection to *Innoculation*. I have even seen children labouring under many *Scrophulous* sores during the Eruption, and the disease was equally mild, ^{as} with others.

4th Advantage. We have an opportunity of rendering the disease milder by the choice of the season.

From an Observation of Dr *Wintringham*, that an *Inflammatory Diathesis* contributes to increase the Malignity of the *Small pox*, and that when *Inflammatory* diseases prevailed, in the same proportion the *Small pox* prevailed and were more malignant, I formerly declared for the Winter Season being improper; but, considering the *Small pox* as a very putrid disease, I thought the putrescence would be in Summer by the heat; in which opinion I thought myself confirmed by observing that in *Glasgow* one year (when the *Small pox*

pox were very ripe there, the number of Deaths were the greatest in the month of July, increasing from Spring till that month, and decreasing afterwards till autumn; and therefore thought that Inoculation should be confined to the vernal and Autumnal seasons. I apprehend however I am wrong, as Physicians in general now chuse to inoculate their patients in Summer.

The disease is Inflammatory, and it is a Phlogistic Diathesis that lays the foundation of the confluent small pox. Now from the histories of Epidemics we know that the Summer puts an end to Inflammatory diseases. The conclusion therefore is that the Summer may aggravate the Confluent Small pox, but is much less liable to bring them on. The Summer season too is especially convenient for admitting the open air, cool regimen &c, and I would now alledge that Inoculation is not to be practiced till the cold of the Spring season is gone, and not after the Cold of Autumn comes on. This then is a great advantage of Inoculation that it allows us to chuse a proper season.

A 5th Advantage is, avoiding the concurrence

ence of occasional causes.

This, though it has been but little noticed, seems to me to be of the utmost consequence. — In all cases of Contagion the greatest part do not produce the disease without the concurrence of these causes; for these give activity and force to the Contagion. Therefore whoever knows the violent effects of fear in the plague should by all means endeavour in Adults to remove this cause. — Intemperance and Excess of Venery are likewise occasional causes. — The Inoculation of children should therefore be preferred to others, if it was only for their being free from Intemperance, Excess of Venery &c.

6.th Advantage is, Preparation of the Body. — Something is to be imparted to this, but not so much as has been commonly supposed. When we inoculate a number of Children with the same matter, and yet the disease turns out differently, we must refer it to a peculiarity of temperament. This state of temperament must be increased by Animal Food, and diminished by Abstinence. The *prima via* should be carefully cleansed; but the means of effecting this by Mercury or Antimonials

Antimonials I have little faith in. To pretend that it changes the habit is ridiculous, for the quantity exhibited is too small for this; and if we give it in larger quantities it is dangerous, as it is constantly throwing into the body an Inflammatory Stimulus, and in general I apprehend the Mercurial courses are hurtful.

Many years ago the preparation of the body for the Small pox was pushed to a great length, but it could not be observed that the persons thus prepared had the disease more mild than otherwise, and the mercurials were thought rather hurtful. As to Antimony it may have some effect in obviating the spasm on the surface and determining to the skin, but what in the preparation I know not. It has been only employed in such quantities as cannot be of any advantage. Even in Fever you know how often it disappoints us. Upon the whole, concerning the preparation for the Small pox, I conclude that the Dietetic preparation is always proper, but the Pharmacutic is still on a very uncertain footing.

The improvements lately in the conduct of Inoculation are said to arise,

1.^d In certain secret remedies; but this seems to be purely a piece of Quackery.

2.^d In the choice of matter; but it is of little advantage.

3.^d The keeping the body cool by the use of Acids, Refrigerants, and Laxatives. These are certainly very proper, but of no great importance.

Lastly. The cool Regimen. The good effects of this are established upon a very large experience, and if the generating power is greater than usual, cool air is undoubtedly necessary. The only question is, whether the exposing persons to as much air as is generally practiced is as useful as it is commonly imagined? When there is a considerable number of Pustules, whether of the distinct or confluent kind, it frequently happens that the patient cannot move thro' soreness or weakness, but must lie in bed, and whether, in this case, is cold air to be admitted? I should imagine that in this state of the small pox the patient ought to be tolerably covered and defended at least from constant streams of Cold Air. — Whether the Indian practice in this case of throwing Cold water upon the patient may not be of service

vice I cannot say as the Cold is only then transitory.

The next thing to be considered is the Cold Water given to the Patients for Drink by the new Practitioners.

Where there are a number of Pustules it necessarily follows that Anginous Swellings and Salivation are present, and whether is cold drink admissible then? — I do not know what might happen in the case of cold drink given from the beginning of the disease; but I have seen fatal consequences from an accidental cold drink. I doubt therefore how far cold drink is proper and may be given, as nothing relieves the patient more than supping tepid drinks. What has happened to the new practitioners I know not, as they generally take care to conceal their ill success.

Upon the whole, Inoculation promises the utmost advantages, which I have endeavoured to explain to you. They are

1. From the nature of the matter employed which is better as extracted from the body, than from a latent focus.

2. It is probable we bring on the disease with the

the smallest quantity of matter possible.

3. The choice of the person with respect to situation and constitution.

4. The choice of the season of the year.

5. Avoiding occasional causes.

6. Preparing the body by Diet & Regimen.

7. Conducting the disease in Inoculation.

We now proceed to consider the conduct of this disease from whatever source it may arise. I shall omit the ordinary routine of practice in this disorder and mention only some circumstances relative to the worst parts of the disease, and the usual remedies.

1st During the time of the Eruption it is a question, How far Bleeding is proper? Sydenham advises it; but from the benignity that is to be expected in Inoculation, it is rarely practiced, and it is neglected for fear of weakening the Eruption; but these are ill founded. We know that for once that the Eruption is prevented from the weakness of the System from want of fever, for ten times it is retarded from excess of fever. I think that it is not the direct force of the fever that pushes out the Eruption, but that such Eruptions

Eruptions are formed in the Remission of fever when the Spasm has given way, and hence the best means of doing this is by Bleeding. An instance of this we had lately in the Infirmary, where a Patient, with a pretty sharp eruptive fever, was bled by accident at the very moment of the eruption's coming on; by which means all the symptoms of relaxation ensued and the eruption became full and complete.

The disease is so often of an Inflammatory nature that the practice would be generally proper, and frequently necessary. On some occasions the eruptive fever instead of the Inflammatory may be of the Nervous or Putrid kind; and here where there is a great prostration of strength, vomiting, anxiety, considerable, pulse small, face pale, I would doubt of admitting bleeding, and I would be governed by the prevailing Epidemic, and by the season, situation of the climate &c. for these influence the habit of the Epidemic whether it be of the confluent or putrid kind.

During the eruptive fever, Purgings has been avoided for fear the determination to the Intestines should take off the determination to the

+ In all cases of the Small pox there is a manifest determination to the Stomach & Abdominal viscera, and here Laxatives and even purgative Glysters may be exhibited with success during the eruption; and this has been my practice for 20 years.

the surface and prevent the eruption; but this is ill founded, for they relieve the system of the eruptive fever and occasion a less numerous eruption. — +

A vomit has been universally given on the supposition of the necessity of cleansing the stomach; but there is a more important intention, viz, to take off the determination to the stomach, which appears by the pain which is especially upon the eruption. This determination is rendered safe by purging, and is taken off by emetics; and vomiting procures the solution of the spasm by opening the excretories on the surface and giving a greater outlet to the morbid matter.

There has been some doubt as to the proper time of exhibiting emetics. The eruption has been thought so much a work of nature, that remedies at the crisis have been avoided; but even then I have seen emetics attended with the most excellent effects.

About the time of the eruption children are liable to convulsions, and if these are violent and continued they are generally fatal.

They are sometimes repeated with uncommon frequency

frequency and great violence, and then are dangerous and commonly fatal.

Blisters and Bleeding are the remedies we have depended on; but they are in some instances precarious, particularly a repetition of the Blood letting; and the Blistering is liable to come too late, the fatal effects being produced previous to their operation. Some more powerful remedies are wanting. I have been told by an eminent practitioner that great success has been obtained by the use of Opium, and that even in an infant a dose of Laudanum put an end to all motions of that kind; I myself have seen the good effects of Laudanum. Sydenham is cautious in their use to infants, but says that in Urgent cases they must be employed. I am of opinion that in this case they will be found the most effectual remedy.

When the Small pox has made its appearance if they be few in number they require no medicines and little regimen, but if many they only require open belly, spare diet, cool regimen, and the frequent use of Opiates.

Opiates. The use of these has been disputed.

It,

— It has been alledged by inducing Costiveness they increase the Anginatory Symptoms, and bring on fever and delirium; but if these Symptoms are all Symptomata Symptomatum, i.e. the consequence of the Costiveness we can avoid it by keeping the belly open.

The ^{chief} question is, whether Opiates increase the Fever or not? They do certainly increase Inflammatory Fevers before the Eruption is begun; but when the pustules begin to suppurate they are sufficiently safe and of service. Dr Sydenham, even in the violence of Fever, before or in the time of the Eruption, used Opium.

When, besides the topical Inflammation that occurs, there is an Acrimony, either determined to particular parts, as in the Catarrh; or exerting its influence more generally over the System, as in Exanthemata; in this case the Opium may be necessary. Likewise, in the case of a putrid disease, such as the confluent small pox generally is; Opium is excellent as a Tonic. Wine too is excellent for this purpose, and Opium may act, and does act in most cases, analogous to Wine.

O H

It was certainly in this light that Sydenham viewed Opium, by alledging they were as specific in this disease as the Bark in Intermittents; and the more evident the irritations of the Sensorium, i.e, the more the delirium appears, the more he constantly advised Opium; and I believe from Experience they are universally useful.

Another remedy not taken notice of by Sydenham is Vomiting. Dr Berginshaus of Berlin first introduced this practice, he exhibiting sometimes Salt of white Vitriol, at other times Tartar Emetic. - At the fourth Tertian period of the small pox, or in the seventh day from the attack, a more full effusion into the pustules takes place, and a redness of the face comes on. It frequently happens, especially in adults, that the effusion does not properly succeed, the pustules have a hollow in their top, swelling of face considerable, the fever here increases, the delirium arises, the dangerous Symptoms come on &c; in this diseased period I have seen Tartar Emetic, given in small doses so as to produce Nausea, take off all these Symptoms, open the belly &c; and if the disease continues

continues I know no remedy so good as the Tartar Emetic sometimes interpolated with opiates.

The Bark is the only other remedy. This has been taken up on the plan of promoting suppuration, which has been supposed to ^{be} the crisis of the small pox; but the suppuration is not a crisis but a symptom of the crisis. — When the pustule is surrounded with an inflammatory edge &c the Bark is pernicious and will increase ^{the} fever, and those symptoms are taken off by Tartar Emetic. The Bark must be considered as a Tonic, and is therefore only suited to putridity and such a state of Debility as attends this disease. The Bark here is only serviceable when given in substance and in large quantities. It is difficult to exhibit it in children, and in adults, when the Angina is considerable, it is difficult to get down a sufficient quantity of the Bark in substance; but I conceive it to be universally useful in the confluent small pox.

Secondary Fever.

The secondary fever is the most common cause of the fatality of the Small pox. This is of two kinds.

1. Where it follows the confluent Small pox it is constantly to be considered as a putrid fever, and hence Bleeding is improper, but it must be treated by purging, Bark, and the moderate use of Opacates.

2. Where it follows the distinct kind, when the Fever is as constantly Inflammatory, and to be cured by Bleeding. — Dr. Mead and Friend always advised Purging in the secondary fever. Considering how often abdominal congestions arise in the confluent kind, the keeping the belly open is of service, but it should be practiced with moderation. Some apply sharp acrid purgatives, by which means they often promote the evacuation to excess, As a putrid fever, to support the tone of the System is necessary, and hence the Bark is especially to be depended upon.

Opium is to be admitted, but so as not to interfere with the natural evacuation by the Intestines; and as the patient during the former part of the disease has been accustomed to them they must now be continued.

Varicella

Varicella.

The Varicella was inserted here as meaning the Chicken Pox. It is often mistaken for the Secondary Small Pox, but this is owing to a mistake. From the short duration of the Fever and the soon passing off of the Pustules and leaving no marks they are easily distinguished from the Small pox. It is what is vulgarly called the Chicken pox, and there being nothing particular in it's cure we omit it. —

Rubeola

Rubeola or Measles.

This is pretty well distinguished from the other *Exanthemata*; the only possible confusion that can arise is between this and the *Scarlatina*, but it is easily distinguished as the Catarrhal affection is always concomitant with the Measles, and but seldom with the *Scarlatina*.

For the History of this, as in the Small pox, I refer you to Sydenham. From the Measles, having been Epidemic here this last winter you might have expected something from me on this head. The only singularity of the Measles this last winter was, that it disappeared in some people for a few days and returned again, even after two or three weeks absence. It must have been from such accident that gave rise to the opinion of this disease sometimes attacking people a second time, which I do not believe ever happened.

With regard to the Pathology of the Measles, we know nothing of the nature of the Contagion, only by its evident effects; and the conduct of the disease turns entirely on the obviating these effects

affects without having regard to the particular cause. The most remarkable effects are,

1. The Catarrhal symptoms that are inseparable from the disease.

2. The Inflammatory Diathesis that prevails generally through the system.

First, the Catarrhal affection. This may be referred to the affinity of the Exanthematic matter with that of perspiration. We suppose from the Exanthemata taking the same course that it has an affinity with the perspiration; it has also an affinity with the Mucous Glands, and when the perspiration is obstructed it affects these glands; it is determined from the surface to the mucous glands, and hence the Catarrh is nothing but perspirable matter and Exanthemata passing by the Mucous Glands.

There is somewhat of the Catarrhal matter that gives it the constant determination to the Mucous Glands; and not only is this specific to the Mucous Glands, but also to the Trachea & Bronchia more especially. I do not however think this so much as formerly. I suspect that the determination to the Trachea & Mucous Glands

Glands of the Bronchia depends more upon a general law of the System. The reason is because in ordinary cases a considerable quantity of perspirable matter passes by the Mucous Glands of the Trachia and Bronchia; hence in an unusual afflux they will be affected.

I have only further to observe that the Catarrh at first is generally dry and attended with hoarseness, but afterwards becomes humid and is attended with expectoration, which is a salutary appearance.

Secondly. The Inflammatory Diathesis. This may be supposed attendant on Catarrh; but here it may be considered as a Symptoma cause; It is not that the determination to the Mucous Glands is communicated over the System, but a general affection of the System takes place at the time of the topical Inflammation. In short the Inflammatory Diathesis is so considerable that the danger that arises in the measles is from the topical Inflammation; which most commonly affects the Lungs.

Cure.

Cure.

We have only to observe the leading Facts. It is rare for the fever to subside on the coming on of the Eruption, but more common to continue through the Eruption. When the Eruption passes away the fever sometimes does so also, but not always, as it sometimes arises and causes new determinations and more violent than before. The fever not only differs in duration and length, but we know the Inflammatory Diathesis is, liable to continue long, but is determined by various causes to appear in different parts of the body.

It is this continuance of the Inflammatory Diathesis that is commonly called the Drag of the Measles. Whether this is a morbid matter or not is by no means for us here to determine.

From these remarks in Pathology it will appear though the Catarrhal Symptoms may and ought to be cured by Mucilaginous remedies, and farther, though a determination to the breast may be relieved by Blisters, ~~yet~~ yet these remedies are rarely palliative; but the

the cure must consist in taking off the Inflammatory Diathesis by Antiphlogistic Regimen; hence by Bleeding, ^{the} is almost the only effectual remedy, and Purging.

Bleeding. Here there is not the least danger of a succeeding Eruption. Here the Eruption is more or less considerable according to the degree of the Inflammatory Diathesis, hence Bleeding will be necessary, as it will favour it, unless it be carried to excess; and further, as to the fever continuing through the Eruption, is of no hesitation. In short from the first attack, in proportion to the fever and Dyspnoea, bleeding is proper; but it is advisable to reserve it till the Eruption or till it is going off. I have said before that, in the Eruption, the fever is liable to rise: it is here at this time that the danger of the Inflammatory Diathesis is to be apprehended, as it now becomes topical, to some vital organ. I say this because I have observed, before the Eruption, Anxiety Dyspnoea &c, which should indicate Bleeding, but on the Eruption they disappeared.

I have also observed at the turn, (3^d day) that is when it was ready to disappear, Anxiety, Dyspnoea

Dyspnoea and Fever, but this on the fourth day would entirely subside.

If I could be sure of this, Bleeding would be unnecessary, but, as it is not, Bleeding is admissible, and in these cases safe. But at this time (fourth day) Bleeding is necessary to a quantity, and from hence it is I chuse to spare it at the beginning. Upon the whole it will appear, that, during the course and after consequences, Bleeding is our chief Regimen, and the Inflammatory Diathesis may be moderated by Laxatives; but the morbillous part I alledge cannot be drawn off by purging; purging can only abate the Inflammatory Diathesis.

With regard to the various consequences of this disease, and where the Inflammatory Diathesis by determining itself to some viscus produces another disease as Phthisis &c I am not to treat of here, but refer you to those diseases.

There are but two or three questions remaining.

1st The first, and a curious question it is, From the consideration of the practice in small pox of exposing the patients to a free and even cold air during the eruptive fever, as it has succeeded

as well in Small pox I doubt if it would not be proper in Measles? At present nothing is determined about it. — Many who have been affected with Measles, and have not known what it was, have exposed themselves to cold, and no bad consequences have ensued.

But, as a Catarrhal affection, and as Catarrhis always aggravated by cold air, I doubt if that will not affect us — I should be cautious about it, but I am certain Hot air is to be avoided, as hot room, much bed clothes &c. which is a circumstance that aggravates in every Inflammatory Diathesis.

2^d Question is, How far are Opiums admissible? I touched before on this in Peripneumonics. I have said, as to that and all others, where there is a particular Irritation, we get more benefit by ease to the patient than by aggravating the Inflammatory Diathesis: — But more here, as there is a general irritation of the System; upon that consideration it is even proper and necessary, and from this way of reasoning, and the authority of Dr Sydenham, I have given them with safety and success. There is a

3^d Question, which, I could wish, but I am not capable

capable, of saying any thing on, Whether we may
Inoculate as in the small Pox? — Where it can
be executed it must be as advantageous as in
the small Pox — but the execution is difficult.
Dr Hume has mentioned many things in favour of
it; but I know out of eleven there was only one
affected, and that there was much doubt about.

Miliaria
3

Miliaria.

On this subject I thought once to have said a great deal, and indeed much may be said too, but on consideration I found much must consist in Criticism upon Authors, hence would be dry and useless, and therefore I shall avoid it, and for another reason, I must be led to judge of many facts that have not fallen under my own observation. I must be satisfied with giving you the result of my own Judgement. The

1st Proposition is, that at least the Miliary Eruption is frequently symptomatic, that is, it is not Idiopathic originally, but a symptom of other diseases.

1. There are certain persons who never sweat to any degree without this Eruption.

2. It is attendant on many different diseases, as the Plague. It is surprising that no notice is taken of this, from the writers on the Plague (Chenot &c) who all make it in the plague.

3. In the local fever likewise.

4. In varieties of the Typhi.

5. In

5. In all Ptoechia, as the plague &c.
6. In Catarrhal fevers or Influenza.
7. In many Inflammatory Rheumatisms.
8. In Pleuritis also.
9. In Intermittent fevers that are with profuse sweat.
10. And Lastly, no where so frequent as in Child-bed fevers. Now as they attend so many diseases you must observe they are merely Sporadic; and though it attends Epidemics often, in a number of these cases it does not avail.

In all the above cases it never occurs but with sweating, and in those that are more tightly wrapt up: So, when I observed it in Rheumatism, it was confined to the parts wrapt up in flannel for the Rheumatism. Dr Fordyce observes that it appears where the body linen is more tight to the body, as under the arms &c.

To lead you further - The eruption observes no stated period at all, notwithstanding what has been said, and as thus undetermined in duration, I observe further it is not like other Exanthemata, finished by one eruption, as it goes and comes sometimes five, six, and seven times, in the disease, and will attack a person several times in his life. I would not

not say the going and coming and duration was sufficient to determine it; but it is to be suspected to be no Contagion. I think, upon the whole of the facts, there is no specific Contagion but rather that it can be occasionally generated in the body.

These are the various considerations to render it a Symptomatic disease.

But, on the other hand, to render it Idiopathic, however it is generated. It has appeared only lately in 1650 at Leipzig. It has spread over most parts of Europe in the appearance of a Contagion. These are strong facts to shew in certain cases that it is contagious. It is true it only attends Sweating, but then this Sweating is of a peculiar kind, and from a peculiar fever, so much that, sitting on the bed, by a certain feel you can say such a person will have the miliaria eruption. It is observed further that there is a peculiar Anxiety, sighing, feeling of the skin as if a contagious Eruption was to follow; a particular ~~Stupor~~ ~~Stupe~~ at the Extremities of the fingers is likewise felt, it being a general feel as if you were pricked with spines. And further, this strong circumstance alledged, that if one person in a family is affected with it, it usually goes

goes through the whole family.

Among other circumstances, Dr Fordyce asserts, that, by feeling the patient, his hand only has been affected by the Miliary Eruption. — All these facts are peculiar and to be considered.

It appears to be symptomatic from the Eruption having no fixed period or duration. In the cases we have mentioned there is no evidence of a specific Contagion, and it seems to depend on a matter which may at any time be generated in certain conditions of the body under Sweat. On the other hand it is alledged that it's appearing only first at Lepsic in 1650 and spreading over Europe is a strong Argument for it's being a specific Contagion. The Eruption is attended with a great anxiety and pricking feeling ~~feels~~ over the body, and when broken out it appears contagious as many of the same family are generally affected with it. I alledge the disease was known long before 1650, and described by Fernelius, Fonglus, and, I think, by Hippocrates himself.

But, it's not being described before that period, may be accounted for, from the consideration of the histories of diseases being so very imperfect before.

before the time of Sydenham, and the Miliaria being a symptom by no means alarming may be the reason for its being passed over in silence.

With respect to all cutaneous eruptions, nothing has been so ill described in general; but further if it is frequently symptomatic it is no wonder it is frequently omitted as of little consequence, hence this is no proof. In tracing its progress there is the same inaccuracy. With respect to the odor of the sweat, &c, it will be accounted for equally well whether considered as symptomatic or Idiopathic.

My conclusion is then, that the Miliaria are very rarely Idiopathic, and almost universally Sympathic, and when it appears, commonly though then Epidemic or in family, it may yet be symptomatic and owing to the fever giving a peculiar state of sweat and hence this eruption.

In my Synopsis I have given a character of this disease agreeable to the most common cases of it, and also to those who consider it as Idiopathic. Authors have not kept to one single character, you are not to expect them so precise; they have the purpura alba & rubra; the former is what

9

I have described. With regard to these I find a good deal of inaccuracy. In England they term the Rubra a Rash, and of these there is a great variety also - in the Alba too. In many there is a small vesicle of the size of a millet seed; in many others almost to the size of small pox. In some they are filled with serous fluid, in others with Pus.

Now in all these varieties they are all accompanied with the same symptoms that have been supposed peculiar to the Purpura Alba; from this I am particularly disposed to consider the whole as a symptomatic affection. Nothing is so common among authors as their joining the Miliaria & Ptechia together. In the disputes at Vienna De Haen and Storck with their partizans have constantly confused them together.

So much to the Pathology of the disease, now to the
Cure.

Let those who consider it as Idiopathic give their cure, I confess I cannot do it for them. — Even as a symptomatic disease, as being of a determined uniform kind, it may be supposed to require a peculiar uniform treatment; but as they attend
diseases

diseases of a very different nature, as Inflammatory fever, which would require Bleeding, and as attendant on Putrid fevers would be opposite and so what would serve one, will destroy the other. I am more inclined to agree with the venerable Dr Fisher first Physician to the Czarina; in his treatise de Miliaria published in his 80th year. He lays down three Indications of Cure.

I am inclined to the third, that every part of the Sudorific Regimen should be avoided; he adds that the Silesian practice of washing with cold water is dangerous, and that even Cold is better to be avoided. Heat is especially to be avoided; he blames the employment of heat very wisely, because, says he, whatever increases the Eruption increases the disease.

Sir David Hamilton was the only English writer who first insisted on the warm regimen; he was a Mannheimse and his practice here was particularly to the Child bed fever, and it is probable by this means he sent more people out of the world than ever he brought into it.

Dr Fisher says, he took no pains to favour the Eruption, as it always increased the disease.

our

our business is to avoid the Eruption; the same of Small pox also, excepting so far as giving cold to Excess. — With regard to Bleeding, Purging, Blisters, and Bark, you will see the opinions upon them as many as there are different authors.

The disease considered in itself is trifling, and the cure must depend on other circumstances than the Eruption; we must study the fever accompanying it, and only this must direct our practice).

Dr Fordyce was the last writer who wrote upon this subject; he mentions many good facts, but they are not properly arranged, and his Medicines are compiled strangely fluctuating and contradictory and will puzzle you without the key I have laid down to you.

Scarlatina
3

Scarlatina.

Scarlatina and Urticaria have been both put together by Sauvages, but by the different period of the fever and Eruption they should be separate. There can be no doubt of this being a specific contagion, and a rare one too; it is Epidemic and frequent; I have had but two cases to observe its rise. It is an Inflammatory disease, and so far resembles Measles: it has likewise some Catarrh but not constantly, and it is often without it. It has also Angina attending it; but before I speak of this I shall remark the seasons in which it occurs. As a contagious disease it can be propagated at any time, but as a Catarrhal affection more frequently in winter; that is its proper season and a proof of the Inflammatory Diathesis prevailing in it.

Dr Sydenham's rule that this and measles come on in the winter and disappear in the summer solstice; here they observe the same progress as most Inflammatory diseases; but there are such changes in the Air in this Island that may bring on the Inflammatory Diathesis at any

See a more full & satisfactory Acct. of this Disease
in Dr. Cullen's first Lines.

any time. Its peculiarity is that it may be said to be of two species, either with or without Angina.

In all that I have observed they were with Angina and to a great degree, and I should not think there was any other. But Dr Sydenham does not hint this Symptom and he certainly has seen an Epidemic without it.

As to its Management, when it is without Angina it is easy, except you treat it with a warm regimen; when with Angina it is attended with an Inflammatory Diathesis, and the dregs &c is the same as Measles. In short, in the cure at all times of the disease Bleeding is our only remedy. As to the Anginous Scarlatina it is of the Phlegmatic kind, without swelling, & erysipelatous, and get an ash colour and brownish slough, and sometimes to Gangrene. As to the accident of Gangrene it may happen no doubt, but in all those I have observed it did not. In my practice universally as to the degree of tumour and Inflammation I practiced Bleeding, and I did not find ^{in one} instance the Bark necessary which would have been if Gangrenous. 9

I doubt very much if the Scarlatina has this appearance at all, and if it has it is in very few instances. ~

Urticaria.

This disease is frequently symptomatic, and as such mentioned by Sydenham and other writers, hence there is much doubt if it deserved a place here among the Idiopathic diseases. I know a person that is liable to febrile disorders, attended with anxiety, Dyspnoea &c that requires Bleeding at the Crisis, is this Urticaria, like the stinging of Nettles.

In many cases it may be considered as an Inflammatory disease. The eruption for the most part is slight and transitory, and gives no trouble in the cure &c. It generally appears at night & goes away in the morning, continuing absent during the day, & returning again at Night.

Pemphigus

Pemphigus.

As to this I have nothing to give you but at second hand, and I think it but a rare and uncommon appearance. In this country we have an Eruption called Plebs; they are large Blisters, larger than small Pox, filled with a transparent liquor, which falls off in dry scales. Sauvages takes notice of it under his Pestis, that such Eruptions (Eruptions) occur without fever; such as occur with the *Castrensis Helvetica* are of the pestilential kind, which are malignant fevers attended with this Eruption. I can say only that the fever here is the only object of our practice.

Aphtha.

This I have never seen Idiopathic in adults, & I consider it as symptomatic entirely. As to both, whether Idiopathic or Sympathic, I am absolutely at a loss either as to Theory or Practice. — Except in a little common experience of cleaning it & I know nothing of it, and I shall refer you to Dr Boerhaave and Van Swieten, where he considers it frequently Idiopathic. —

Order IV.

Hæmorrhagia.

Hæmorrhagia.

This is a new order in Nosology. In different Systematics Hæmorrhages are united with the Fluxes in general, as with the Profluvia by Vogel &c. - This makes a very artificial class and unites diseases of a very opposite nature. The profusio sanguinis ex vulnere is made a genus along with those proceeding from an internal cause: In short Hoffman is the only one who has noticed the Hæmorrhagia as belonging to the order "Febriles".

Every Physician has marked a difference between active and passive hæmorrhage. - The active Hæmorrhages always arise from an increased action of the vessels of the part; this we only treat of. The passive we have referred to the class of local affections and the Order Apocænosæ.

J. H.

The Hæmorrhagiæ have for their character "*Pyrexia cum profusione sanguinis absque vi externa; sanguis misceus ut in Phlegmasiis. The character of the Apoceneses is "Fluxus sive sanguis aut humores alii solito uberius profluentes, sine pyrexia impetive, febrilem aucto."*

Having thus ascertained the subject we shall first begin with giving the more general Pathology and Cures of Hæmorrhages.

With regard to Hæmorrhages I flatter myself we can deliver ourselves with clearness and precision; There is no part more perfect or more clear than the present subject. I am sorry our time will not admit a more full discussion of it. I must refer a great deal of it to my Institutions of Medicine.

This is the series of Phenomena in all active Hæmorrhages.

1. There appears marks of fullness & tension in the part or neighbourhood from whence the Hæmorrhage is to proceed. This I have marked. In the Epistaxis I have said "*Faciei rubor dolor capitis*" &c. which are marks of a fullness and distension of the part.

2. Before the blood flows a cold fit is formed, which

which is succeeded by a hot one. Upon the flowing of the blood the pulse is increased &c. This in many cases is evident, in others more obscure, but gives no difficulty, only, that there may be topical Hæmorrhagy as well as topical Inflammation.

3. The flowing of the Blood takes off Irritation and the Spasm, and therefore the hot fit ceases and with it the flowing of the blood. There is the same spontaneous separation of the blood, and of the coagulable Lymph and Inflammatory crust as in the Phlegmasia, which gives evidence of a Phlogistic Diathesis.

From this series of Phenomena you see the whole is founded in a congestion, i.e., in a preternatural accumulation of blood in certain vessels. This probably depends on a change of the balance of the system, a change in the distribution of the blood. But though the balance is taken off by Hæmorrhagy yet the distribution remains and hence the renewal of the disease. — Where these Phenomena are not distinctly evident we may suppose Topical Hæmorrhagy as well as Topical Inflammation, and hence the relation between

between these two: In short the Theory of both are nearly the same. In Phlegmasia there is a congestion (which implies a more difficult trans-mission) which gives a sense of uneasiness, hence a reaction is produced, such as accompanies any unusual effort of the System and is attended by Horror and Spasm. The sameness of the causes then in both will be evident; only in Hæmorrhages the congestion is more remarkably evident and the increased action is in the red vessels which can be readily ruptured; whereas the Phlegmasia is an Inflammation in vessels of a compact texture, and not liable to the same effusion; but in many cases the effusion does occur. The Arabian therefore were right in making both diseases consist in a congestion; but their final causes are inadmissible; for it depends on a Physical necessity, however difficult to be explained, whether we suppose it from the Interposition of the Soul or more purely Mechanical, rather than an intelligent being directing such and such assertions.

We have now traced up Hæmorrhagy to Congestion, and must now then consider what may be the cause of Congestion?

Inq

In the Stamina of Animal Bodies we must suppose in their original form there is a provision for certain vessels receiving blood sooner than others and in larger proportion; it is only by this we can explain the successive evolutions taking place in the different parts of the animal body. The blood is therefore from necessity, unequally distributed, to which the solids are or should be ^{very} exactly adapted. Sometimes it is so, and hence we do not perceive the inequality of the distribution and no disorder in consequence of it. I might illustrate this by supposing that the health of the body depends on this distribution being equal; but from difference or faults in the original Stamina we find inequalities frequently arising. But independent of a fault in the original Stamina or from external causes there are relaxations and constrictions in the vessels that give occasion to Hæmorrhagy, and the distribution may be changed by it.

We must now look into it's causes. It depends on this that the Animal body has it's vessels always in a plethoric state, every fibre in the system being stretched to the degree it could be stretched without

without external force, and therefore the smallest change of distribution must have great effect.

This tension, to a certain degree, is necessary to the system, and must be adjusted by a proper balance. It is only when a part is stretched beyond this balance that it forms a morbid plethora; and when this happens the relaxation and constriction prevailing in a particular part must have great effect in changing the distribution; This is what is necessary to understand in congestion.

To apply, this, I shall give you the history of the hæmorrhagic state.

1. It is necessary the body should proceed from a small to a considerable bulk; the vessels at first are lax that they may easily admit of distension. The vessels must be constantly full and must be stretched more and more; but while the laxity of the solids is considerable the effects of distension will not be perceived; and the morbid plethora will not appear in the first part of life; but as the solids, by being stretched, acquire more firmness and rigidity as the body increases the resistance in them is daily encreasing till the animal

Animal arrives at his Acme. Hence the Plethoric state occurs first about the time of Puberty and this arises from the peculiar change then occurring in the balance of the System.

The head for various reasons is the part first formed, and hence receives a great proportion of Blood; but, as it sooner acquires it's Acme, it soon acquires that resistance to the blood, and hence soon acquires the plethoric state; hence Nasal hæmorrhages &c.

From this also we explain the evolution of the Genitals, and when the balance is changed at the time of puberty the plethoric state comes on in the head.

— The plethoric state will be felt more generally when the body acquires it's Acme, and it is easy to see what part is most likely to feel the overcharging; why the Lungs, especially if any accident in their original confirmation has not admitted their having a proportional growth to the other parts, from the smallness of their vessels, are liable to congestions (effusion of blood) at the age of puberty.

Though the difference of distribution arises here, yet it is not always sufficient to rupture the vessels unless with the concurrence of some external causes. Such
Hæmorrhages

Hæmorrhages can occur at any time while the Arteries are in the Plethoric State till the balance between the Arteries and veins is exact.

The density of the Veins is greater in proportion to the Arteries in the first part of life; but afterwards it gradually increases in the Arteries, and hence throws the plethora in the Veins. This we suppose nearly to happen about the age of thirty five; and then the balance is entirely established.

— Arterial Hæmorrhages without external causes after this time do not occur: Congestions in the Venous System now produce even active Hæmorrhages. If congestions are formed in the Venous System it will be in those vessels where the motion of the blood is slow, and particularly in the System of the Vena portarum, hence in the Hæmorrhoidal veins. In other parts too Venous congestion may produce the same, and in the Brain especially the motion of the blood in the Venous System is especially liable to be interrupted; for the veins here want the assistance that veins have in other parts of the System, viz, Muscular action which they have not. As the vessels of the Head sooner acquire their perfection it is probable they sooner acquire their

their rigidity; and hence we can understand why these sooner bring on Juvenile Hæmorrhages of the nose, Apoplexy, Palsy &c, or whatever is attendant on increased action of the Arterial System.

I have thus traced the History of the Plethoric State. I have hinted in what manner this state produces our several genera of Hæmorrhages.

This is sufficient to lead us to some general questions in regard to the **Cure** of Hæmorrhages.

Question 1.st How far is Hæmorrhagy an object of our practice, and is it to be cured? It has been acknowledged that it is merely an effort of nature to remove the plethoric state and hence is salutary. — This is the doctrine of the Stahlians founded on the *Aerogareta*. The notion is only true in part & we shall confine it to its proper limits.

The fault chiefly arising in the Animal Economy is from Plethora, and nature relieves this by Hæmorrhagy they observe. A person is affected with vertigo, Apoplexy, Palsy, Epilepsy, and they have experience of these being removed by Hæmorrhages at the nose. But though we cannot in many cases explain the Symptoms preceding it, yet they say it certainly is necessary to the supporting ^{due} balance of the System, and

and must not be stopped. But in all this they have gone to excess, for they have considered every Hæmorrhage as critical and salutary and depending on some plethora or change in the balance of the System: But other causes may produce Hæmorrhage; thus, according to the density & firmness of the vessels, even Exercise will produce Hæmorrhage. The passions of the mind also and irritations applied to the vessels will in the best constituted Systems produce Hæmorrhages, even those of the active kind, without changing the balance or distribution of the Blood. We say therefore that the Stahlians have gone too far, and it is only in Congestions that Hæmorrhages can be supposed useful to the System.

We go further, and say, that though Hæmorrhages, general or partial, may be necessary, yet the repetition of them should certainly never be encouraged in so far as Congestion can be obviated - and in most cases it can be obviated. It is then only when Congestion is absolutely unavoidable that we can suppose Hæmorrhage to be of use.

Another observation is, that though a Hæmorrhage arose from Congestion, and this not from an occasional cause, but one gradually operating and producing

ing both; yet these causes would not return if they were not confirmed by habit or repetition. All hæmorrhages can become habitual, and this without the renovation of the original cause. The explanation is obvious; for if there was not a resistance to the excretories our blood would soon pass out of the body, and the hæmorrhage must depend on the precise balance between the larger vessels and the excretories; and the action of the larger vessels will depend on this balance.

If a quantity of fluids is withdrawn from the red vessels, these vessels are relaxed; for their tension depended on their quantity, their tone on their tension, and on their tone depended their balance with the excretories, and if they lose their tone their balance is lost. Thus we account for the quick supply of Blood, and if this was always suddenly done no inconvenience could happen from the abstraction of the Globules and Lymph; but the renewal is long about, and the excretories are in the mean time under a state of collapse and have acquired a rigidity; hence a morbid Plethora; because a proportionable evacuation is not now made from the excretories.

Thus

Thus it is that Spontaneous Hæmorrhages & blood letting will occasion Plethora. Thus Hæmorrhages become spontaneously periodical; thus artificial bloodletting becomes at the same intervals necessary to the system. The application then is that Hæmorrhage may relieve the effects of the present Plethora, yet is by no means suited to the original cause of Plethora; but on the contrary increases it. Hæmorrhage therefore is to be obviated by every possible means.

The means of doing this are,

1. By diminishing the quantity of the Aliment. This is one of the surest means of obviating the plethoric state.

2. By lowering or diminishing the quality of the matter or aliment. By quality is meant the quantity of nourishment the Aliment affords.

It is said that Hæmorrhage does not depend so much on the general as on the partial Plethora, & hence aliment will be of little service, as in the Menstrues the evacuation too soon proceeds under great differences in diet. In part this is true, but I maintain it is not strictly so; for I say every partial congestion must be much influenced by the

the general state of the system.

If it be true that Hæmorrhagy is always accompanied with Phlogistic Diathesis, we know that this last will be increased by the fullness of the red vessels which may be diminished by low diet.

3^d Means is Exercise. Most men will become plethoric even on a small quantity of Aliment, if they use little exercise, especially women, and the difference between the sexes in this respect arises from the Exercise, i. e. with respect to corpulency.

Exercise hastens excretion & occasions a dilatation of the vessels, and particularly the most considerable one, viz. perspiration, hence the effect of Exercise in preventing plethora; accordingly we must observe that every motion to which the body can be subjected has this effect; but an exertion of its own powers, viz. Muscular motion, by exciting the action of the Heart & Arteries must have more remarkable this effect; and hence the preference of bodily exercise in plethora.

But, in Hæmorrhagy where partial congestion is already formed, Exercise may be dangerous; but in the lungs moderate exercise, by accelerating the motion of the blood, may be of service: in this

this however bodily exercise is to be rejected, and only gestation is admissible.

Whenever bodily exercise is employed, to obviate plethoric congestions & their consequences, viz, Hæmorrhage, it must not be violent or by fits; for in this case it will always produce a proportional subsidence of the circulation in the extremities, hence the Stahlians are very proper in alledging that Exercise must be constant & uniform and then it will be effectual in removing congestions. But in partial congestions there is always danger of urging Exercise; but in this we may go to excess, for exercise gradually introduced, and at the same time constant, may obviate every particular topical determination. Exercise by exciting the action to the surface, takes off the determination to the interior parts. Sydenham recommends the use of bleeding in Hæmoptysis, but practitioners alledge it is pernicious.

When a vessel is opened, any violent motion may produce Hæmorrhagy, but I have known several cases where the Hæmorrhage was stopped by Gestation, and when the patient was confined

to his chamber Hæmoptoe ensued, and as constantly was removed by riding. The determination by riding to the external surface diminishes all internal determinations.

It means is by taking away the plethora formed before it has had its effects in producing Hæmorrhagy. This is to be done by Bleeding. - Bleeding may be effectual so far as Hæmorrhage depends on a general Plethora, and sometimes even when it depends on a topical congestion, but in both cases it is a precarious remedy; for though it takes off the present plethora, it certainly occasions a renewal of it, and it must end in an habitual practice of Bleeding.

Though Hæmorrhage is liable to a periodical return, that period is by no means constant & determined, but often irregular, owing to some circumstances of the system, as from the dilatation the vessels may admit of, or the resistance the secretories may acquire.

Periodical Scarifications have been proposed near the part where the congestion occurs, but in most cases we cannot bring them so near the partial plethora, and of consequence the Scarifications cannot give us that sudden depletion

depletion on which relaxation depends, in a word it has all the inconveniencies of more general Bleeding. They are both confined to cases where the Plethora & Congestion are already formed & ready to break out; and ^{even} without exercise and a proper diet they will be found superfluous & useless.

In order to render them safe it requires a nice management, First, that we attend more to the symptoms of the Plethora than to its periods, that we may anticipate & obviate the distension of the vessels.

The doctrine of Derivation and Revulsion is now very little regarded by Physicians. Hoffman, in a bleeding at the nose, advises an aperture at the feet. This no doubt is to procure a revulsion; but it is not the determination we are so much to consider as the Phlogistic Diathesis, and where we can open a large vessel we shall obtain more benefit than by any revulsion. A topical Bleeding however may be advisable, and in Bleedings at the nose I would trust more to the Jugular veins, as being nearer the part affected, than to the veins in the Arm.

We now come to consider the practice when the hæmorrhage has actually occurred.

The

The Stahlians say that the Evacuation is by no means to be stopped, and innuente that it is probable the Evacuation will be precisely adapted to the necessities of the system. When Plethora has taken place Hæmorrhage is certainly somewhat useful, and I say that it is not to be stopped altogether nor suddenly stopped.

This however by no means supercedes the using Medicines for taking off the plethora.

With regard to their observing that it ought to be left to nature, it is not of much signification to notice their Arguments. Every body is now well convinced that Hæmorrhage, however excited, may go to excess, and in Congestion they frequently go to fatal excess. Nothing is more common than for them to produce incurable Dropsy and favour the return of the same state that originally induced them. I likewise say that they are not suited to the necessities of the System nor to a previous plethoric state but to a phlogistic Diathesis which is increased and excited by a variety of causes, and therefore in all cases I say that we may moderate the degree of Hæmorrhage by any means not suddenly stopping it, as by so doing, when there is

is increased impetus in the System we may direct it to more dangerous parts.

The Remedies for stopping Hæmorrhage are

1. The Antiphlogistic Regimen.

2. Bleeding.

3. Refrigerants.

4. Ligatures.

5. Astringents.

These are to be employed on the first coming on of Hæmorrhagy, and afterwards to attempt the cure by Blisters and Vomiting.

1. The Antiphlogistic Regimen consists in avoiding Irritation, the extent of which is the same, as in fever and Inflammation, only here there are some particular Irritations, as avoiding external heat as it rarifies the blood and gives occasion to the Plethoric state; and another Irritation we are to avoid is motion of the part; as speaking in Hemoptoe; Venereal exercise in Menorrhagia; and it is necessary to avoid these postures that favour Congestion. In a hæmorrhage of the Nose the erect posture should be avoided. In the Menorrhagia not only an horizontal posture but an elevation of the lower parts may be necessary as I had occasion to experience in

in a patient.

2. Bleeding.

Physicians have been much divided with respect to the quantity of Blood to be drawn; the Germans only advise about 8 ounces; but the French talk of bleeding twelve different times in an uterine hæmorrhage. Bleeding to this quantity may produce Dropsy and is as much over the mark as the Germans are below it. It must always be according to the constitution of the patient. Most practitioners, except the French & English are timid in Bleeding in hæmorrhage and therefore the German Physicians depend on Refrigerents.

3. Refrigerants, are either resolved into Nitre or Acids; which are the most powerful I do not say; Hoffman gives the preference to Nitre. This may be useful as a neutral by determining to the surface of the body, and as an Antiphlogistic laxative; hence its use in every Hæmorrhage except that in the Lungs, as it proves more or less of a stimulus generally and excites Cough.

We have instances of Nitre in certain cases, proving Stimulants and exciting Vomiting. As

a refrigerant I imagine we can obtain more from the Acids. The Vitriolic, which we employ of the fossil Acids, may be given in considerable quantities. A practitioner in London gives the Acid to the quantity of half ^{an ounce} ~~a pound~~ a day. As those determine to the surface & assist the various secretions they certainly may be useful.

A. Ligatures.

These to stop the return of the Venous blood must be applied above the extremities; but it is only to compress the Veins. It is a nice matter to manage the Ligatures so as that they may compress the veins without their compressing the Arteries at the same time, which, if they were to do, would be the occasion of great mischief. I doubt therefore if this practice so often spoke of has ever been of any real service.

5. Astringents.

From these the Stahlians apprehended the mischief I speak of by stopping the Hæmorrhage. We must distinguish Astringents as external or internal. The internal are very little used. Their power is weak, and they cannot do it but by an operation

operation in the Stomach that diminishes the action of the circulating system, for no Astringent will pass the *primæ viæ* &c., and not act till it comes to the particular vessels affected. Whether this action by taking off the force might be of service I cannot say.

The Astringents are 1.st Vegetable - Or, 2.^d Fossil.
As to the Vegetable there are none. The fossil are of three kinds.

1. Chalybeates.
2. The Saturnine.
3. Simply Saline.

Some of the Styptics are much commended, but I never saw their good efficacy. —

The preparations of Lead are more effectual, but they are dangerous as they suddenly diminish the tone of the System and diminish increased impetus, and are apt to produce the *cholica pictonum*. Dr Rundermarch gives them in Fever and Hæmorrhage. As it is effectual from it's Narcotic power to destroy the powers of the System, it must be very cautiously handled, and only in Hæmorrhages of a dangerous kind. The *Tinctura Antiphthisica* [the Tinct. Saturnina] has been

been employed by the London College; it contains a portion of lead. In 100 cases of it's use I never saw it effectual in restraining the Hæmorrhage, and I believe it is as much a chalybeate as a saturnine preparation. However, as the latter, I would not warrant it's free use, but urge it with caution.

The other fossil astringents are the purely saline, as allum. This I never knew exhibited with bad effects. In Intermittent Hæmorrhagy I have seen it's effects in stopping Hæmorrhages in the form of Pulv. Stiptic. Helvet. but as these often stop of themselves the efficacy of the remedy may be dubious. For suppressing the Hæmorrhage certain external applications are most effectual. As to the management of these, to the surgeons I must refer you.

The most safe of the astringents is the application of cold. I have had occasion to say that this can prove a powerful Stimulus to the particular part and system in general, and I have seen a Hæmorrhage increased by it. — It must not then be a transitory application but a continued one that will give Sedative effects. When also

also it is applied more generally to the body & to a distant part from which the Hæmorrhage occurs, and the application of cold to the Testes has been found effectual in removing Hæmorrhages at the nose. Wet cloths also at the back will stop a hæmorrhage of the Uterus. Cold when it stimulates the System 'tis with a determination to the surface, and by this it may obviate the increased impetus internally. The intermediate application of Cold may be productive of the same effects. I have spoke of the Dieta Aquea of the Italians and Hoffmann has cured Hæmorrhages merely by throwing in quantities of cold water. This joined to the use of Nitre & Acids, as all determining to the surface, may be of use in Hæmorrhagy. In case of a Hæmorrhage that should be dangerous by its continuance we must use Emetics and Blisters.

Blisters. As long as the stimulant power of Blisters was only known, Blisters were thought to be highly pernicious; but I have learned from experience that they are of considerable service. As the continuance of Hæmorrhage depends on the Diathesis Phlogistica, their application here as in other cases may be found to have considerable effects. In case of the Menstrual flux &c. we must employ them with caution as too much
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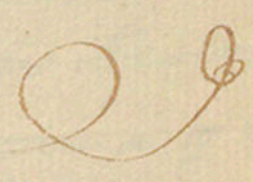
of the Cantharides may be absorbed so as to produce Strangury, and hence it will be a violent irritation to the parts.

Emetics have been attempted: Dr Bryan Robinson used them in an Hæmoptysis; it produced that degree of sickness under which the pulse becomes small, & the impetus is diminished, something analogous to the operation of Astringents; but they excite the action of the System & determine to the surface. This is their principal effect in removing Spasm, and I have frequently experienced their good effects in uterine hæmorrhages.

Cortex Peruvianus is employed in Hæmorrhages, but in what cases I find difficult to determine. I consider it as an Astringent of little efficacy & doubtful use. On the other hand we might expect that it will in some cases prove active & excite a stronger action of the System. There are cases of Hæmorrhage which depend more on a loss ~~upon~~ tone in particular parts, as in the uterus, than it does in an increased impetus in the Plethoric state of the system. Here Peruvian Bark may be useful, but this is a passive not an active Hæmorrhage; but in active Hæmorrhages it is employed because these depend on particular accessions of feverish Paroxysms, in the intervals ceasing

ceasing altogether, and where we can mark the periodical returns of Hæmorrhage there seems then a foundation for the Peruvian Bark. It cannot obviate the Plethoric state, nor any Congestion in particular vessels; and the Bark by preventing the Cold fit being formed while it does not take the Congestion may do much harm, as the Stahlians, alledge.

It is difficult to mark the cases exactly, as it is difficult to discern them in practice. These reflections however must guide you in the application of this Medicine.



I now proceed to consider the several Genera. I have limited them to a smaller number than other Systematics have done, because I include only the Idiopathic leaving out the Symptomatic. You will easily understand this by looking at Sauvages; for instance his Stomacace we have omitted as it is never known but as a symptom of Scurvy.

His Hæmatemesis likewise I have omitted as it is certainly symptomatic.

Hæmaturia too is omitted as it is always Symptomatic, being an attendant of some affection of the urinary passages.

His Abortus we comprehend under Menorrhagia.

The Dysenteria I have not put among the Hæmorrhagia, but under the Order Profluvia.

The Melena I comprehend under Hæmorrhæis. With regard to the several Genera of Vogel, the Synonyms we have just now given will readily apply to them.

Epistaxis

Epistaxis,

called, by Sauvages and Linnæus, Hemorrhagia simply; but we want a particular name for the Hemorrhage of the nose. Vogel has employed this one, and we take it though not very proper.

Pathology.

This I have given: it is founded on the plethoric state of the System in general, but especially of the vessels of the head, occurring at various times of life, and being both arterial & venous, the first of which is by far the most frequent, and what we are to speak of here. There is no where such a net work of red vessels laid in such an external situation as in the nose, and hence a reason why Hemorrhages occur here so often from any increased impetus, and it seems an outlet for the relief of the Brain on various occasions. The red vessels here are not supplied by the ^{external} carotid alone, but also by the internal carotid. Nothing more is necessary to explain a prodigious number of Phenomene occurring in diseases of the head. When we come to speak of these diseases we shall show that they are mostly founded

Epistaxis

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founded on a Plethoric state of the vessels of the Brain.

Cure.

I have here little to add to the general plan, except that the Antiphlogistic Purges are here useful, as they operate by Revulsion.

Hemoptysis

Hæmoptysis.

It's Pathology, tho' seemingly simple, is not well understood, especially with regard to it's consequences. I shall first enquire when it is a hæmorrhage of more or less fatality. It is seldom fatal as a hæmorrhage, but sometimes it suffocates; at other times by evacuation proves fatal. It is by producing a Phthisis Pulmonalis that it proves fatal most commonly.

This is often thus accounted for, because a wound of the vessels of the Lungs is not allowed to heal by the first intention, but is kept open and is necessarily determined to an Ulcer because of the constant motion of the parts. But I do not find the Lungs are exposed to this motion. It is only in violent inspirations that such motion strictly is allowed. The common motion of the Lungs is the most gentle and slow that can be imagined; thus it's motion is only to increase the angles by which the branches pass off, the whole motion is as if it were on joints. Again, we have many instances of Ruptures and Wounds in the Lungs, by external force, healing up by the first intention without Ulcer. It cannot therefore

therefore be owing to the peculiar motion of the lungs but must be owing to a determination of increased impetus thither. I say likewise that the frequent returns of such causes is not sufficient to occasion Hæmoptysis to be turned into Phthisis.

In short, in the records of Physic there are many instances of Hæmoptysis from causes, and with symptoms of Congestion occurring frequently through life yet never producing Phthisis. I knew a Gentleman who died lately in the 70th year of his age, who had during his life the return of Hæmoptysis near thirty times yet never had phthisis. Dr Hoffman on this subject quotes Hippocrates to say this disease is different in different persons, and adds that if it arises from pure plethora or *Idulatio Sanguinis* then it is not dangerous. Therefore ^{when} Hæmoptysis ends in Phthisis it is from other causes than mere Hæmorrhage; for when it is purely so I doubt if it has ever this effect.

It has been said that the access of Air is unfavourable to the healing of Ulcers; but it is doubtful if the exposure to the Lungs is in the same circumstances as in the external wounds, as we see that a little mucus will prevent the air acting on a wound

† meaning dilatation of Vessels, not the general
acceptation of that Word.

wound as we see in a dog licking his sore, and hence there is nothing in the access of air that would make us conclude that this makes them incurable, and we see Ulcers from Peripneumony often heal up as other abscesses. Hence it is not a general but some La coethic state that is the cause of this fatal Termination; for it is scrophulous people that are most liable to a Phthisis Pulmonalis, and we find that the disease is founded on scrophulous tubercle, that is formed in the Lymphatic glands, and we find tumors analogous to these Lymphatic ones in other parts of the System. These sometimes become ulcerated without Hæmoptoe, but oftner the other case happens. In short where Hæmoptoe ends in Phthisis it is owing to its being attended with these Tubercles which seem to be the forerunners of Phthisis.

I have said that the vessels of the lungs are not liable to be stretched, yet certainly the blood may be poured out by Anastomosis or by rupture, and this especially when the vessels are pressed by a neighbouring tubercle. There is no part exposed to such inequalities in the circulation as the vessels of the Lungs and hence liable to pour

pour out their blood into the Bronchie. Besides, Scrophulous Tubercles are not the sole tubercles that affect the surface of the Lungs; because we cannot suppose the conglobated Glands the sole seat of Scrophula so plentiful in the lungs. There are then Tubercles of another kind that produce Hæmoptoe. Their formation is difficult, probable that some determination that produces true Hæmoptoe may occur, which though not in sufficient degree to produce Anastomosis or rupture may still produce Effusion in the cellular texture of the Lungs, which must go on encreasing till it forms a tubercle or cyst.

Labourers that are exposed to dust from the nature of their profession, as Stone cutters, Millers, Flax beaters &c are liable to Phthisis; and this it seems is agreed is owing to collections of the extraneous matter, stopping up part of the Lungs and giving Tubercles.

The Effusions may be various; one well known is a matter that is converted into a stony concretion, and if the matter forming the Tubercle is not disposed to suppurate, it will probably

probably give an ulcer mali moris.

As then many pure Hemoptoes are cured, & so many Phthisical ones depend on Tubercle, we shall retrench the common opinions of Hemoptoes being almost the sole cause of Phthisis.

Inflammation, Hemorrhagy, Catarrh, and Tubercle are the causes of Phthisis; but none seem certainly sufficient without Tubercle.

Previous Tubercles are not always necessary to Phthisis; for we can suppose part of the blood to be left in the Bronchia, which from the stagnation and corruption gives an Ulcer of the worst kind.

Phthisis Pulmonalis.

As to the Phthisis Pulmonalis I was at a loss where to place it in the Nosology, as it is not an Idiopathic disease, but depends on another previous affection, the sequel of some other disease.

The common foundation of Phthisis is the Tubercle which does produce the Hemoptysis; this led me to the consideration of Tubercles, and how far the common doctrine on the subject of Phthisis is connected with this.

Phthisis is referred to

1. Inc

1. Inflammation.
2. Hemorrhage.
3. Catarrh.
4. Tubercle.

When a Hemorrhage ends in Inflammation it will commonly leave an Ulcer, especially when the Inflammation is of the kind of Tubercle.

In the Catarrh we have more difficulty. The cause of Catarrh may be referred to three heads.

1st Matter of Contagion, and determined to the Mucous Glands.

2nd From obstructed perspiration determined to the same glands.

3rd Any Irritation of the Lungs that commonly produces Cough, and in time will necessarily increase the afflux to these Mucous Glands, and give Catarrh.

The 1st cause never operates long, and it will not be permanent unless the 2nd cause concurs with it.

In the 3rd the Catarrh is a Symptom of some other affection; and therefore to consider Catarrh as a cause of Phthisis we must have recourse to the second cause, obstructed perspiration.

Suppose

Suppose a Catarrh formed by obstructed Perspiration, it is evident it must occasion a constant Irritation and Agitation, and by its frequent renewal occasion an increased afflux to the Lungs and Mucous Glands. That such a Cough does increase the afflux of Blood to the Lungs is evident from the spitting of Blood.

It is also evident that frequent Cough occasions a great inequality of flow of Blood to the Lungs, and may hence be the foundation of Tubercles. This seems to be the most obvious reason for Catarrh producing Tubercles.

All these Doctrines seem clear, but there are questions to be asked on this.

1. The ordinary Mucus puts on an appearance that much resembles Pus, as in the nose in the Gonorrhoea, & some others, and may give reason to think the same in Catarrh. Now when the Mucus is thus changed, the question is, whether it is changed into purulent matter, or a matter so acrid as to produce these effects

effects, as hectic Fever, and, its consequences, Phthisis. This is a conjecture that has been made with some degree of probability, but it is quite uncertain. This may explain De Haen's supposition, who says it happens independent of ulceration. If such a thing is possible, I am sure it is extremely rare, and among 100 dissections that were made, there was not one that had this circumstance De Haen speaks of.

This is one way of accounting for De Haen's opinion. Another is by supposing, as red globules may be poured out, so serous fluids may in like manner in that state be fit to be changed into pus, and that it really is so. Whether this is the case of Phthisis I will not pretend to say. I must leave it to the same consideration as I have the others. I only recollect my saying before that a Cough will produce a Catarrh in consequence of afflux to afford more mucus. I have seen many cases of Phthisis from Catarrh. At first the Mucus was only more saline; by degrees it changes to purulency, yet I am certain purulency never happens without this Catarrh. I observe even where there is a purulent spitting that the chief part is mucus, by its colour, odour &c. I mention this as useful in forming our Prognostic of Catarrh from

from a paralent state of the Lungs.

4. To Tubercles, the nature of which I have already explained, and it is probable Phthisis is very generally founded on Tubercles, and Catarrh seems to give rise to it merely by the Intervention of these Tubercles. And now from the whole of these considerations we may explain its different causes and species: — I proceed to the

Cure.

This is to be applied to all the different stages of Phthisis, and therefore to Hemoptoe, to the state of Tubercle, and state of Ulcer following.

As to the two last Stages I know no means of Cure. I own we should avoid such conclusions. I have considered the different means that may be used for these two, and shall give you them.

As to Tubercles we might take the supposition of its depending on Scrophula in the Lungs, and attempt the cure of it as in other parts of the System, but with little hope, as I think we have no remedy for the Scrophula. I observe it generally arises at a certain period of life, and continues a certain number of years.

Practitioners only admit of two Remedies for the

the Scrophula.

1st Saline Waters.

They have been found of service: I am ready to conclude Sea water is much the best of these. But this cannot apply to Tubercles in the Lungs, as all Saline liquors must be bad, as it increases & irritates cough, and we have often seen it of bad consequence, and never with impunity. As to Ulcers, I know not, as we have not the slightest view of their nature, I know therefore no remedy in Tubercles.

There is a 2^d Remedy proposed for Scrophula, viz.

2^d Bark.

What success Dr Fothergill has had with it I know not, I have in a few only seen good effects, but this neither is admissable to the Lungs. I own if we were aware of its beginning it might be tried, but there is generally no warning till it has acquired some degree of Inflammation and Cough. Now if it is advanced so far, Bark is by no means admissable, because I know Bark always increases Inflammatory Diathesis. I have seen above 100 instances of it. I can give you a very particular case of it: A patient of mine was affected with a Cough and other Symptoms of Intermittent fever; he

he had a paroxysm of fever came on about noon, the period that Tertians generally appear in; I imagined this might be an Intermittent as I have known cough attend them. I then urged the Bark and with my expected success of preventing the fit, but it did ^{it} only for a short time, as it soon recurred. I suspected the Bark was not given sufficiently, and accordingly gave it to 3℥ in six hours in the forenoon. This stopped the fits, cough abated, and the patient appeared recovered. But soon after from time to time the pulse rose, cough in some measure continued, and at November the cold brought back the cough, and at last became Hectic; then a copious purulent expectoration took place, and soon after Death.

This will apply here to the use of the Bark. It may prevent the cold fit of Fever, but cannot do service in relieving Tubercles already formed, as in the present case it greatly aggravated the disease & hurried Death. Hence we may see Bark is not at all applicable to Tubercles.

If we, by art, cure Tubercles it is where we have an opportunity of applying external remedies, but I do not know any internal ones that are

of service. Many have been spoken of as vulnerarys &c.; but I know no use of any of them.

Mercury internally has been thought of for Tubercles, as they dispose Ulcers to heal, their reasoning is that it may dispose them to heal as other wounds. But I can say that, in a number of patients that I have seen it exhibited, it rather aggravated them.

In Tubercles, as depending on a general Acrimony, Merc. May be of use, as in the Venereal Taint. But as Mercury is a powerful Stimulus, and as it induces the Phlogistic Diathesis we may say that it will aggravate it, as I have myself seen it do. And I conclude that Mercury may be useful in external Ulcers, I know some cases where it has no such an effect, as in Cancers &c. What is the nature of Tubercles & Ulcers in the Lungs we do not know, and from hence we have ^{no} reason to say Mercury may be given. I need not speak of the other remedies that have been employed ^{as they are} useless, viz Balsams &c.

In short, if Tubercles admit of Cure it must be the work of Nature, and we can only prevent further Irritation & Determination to the Lungs which aggravates it, and we may be of service in taking off this Determination, and we can only apply the
cure

the Cure the same as to Hemorrhage, — They consist in four Indications.

1. To obviate Plethora, or take it off if formed.
2. To take off the Inflammatory Diathesis.
3. To take off the Determination to the Lungs.
4. To restore it to the surface.

As to these Remedies,

1st The obviating Plethora, requires a low diet. If any doubt of that, it answers to the second Indication of taking off Phlogistic Diathesis, and in that respect milk diet is sufficient. But it is not the lowest diet as fresh fruits which have been spoken of by authors for this purpose; but these go farther as refrigerants to take off Inflammatory Diathesis. Though low diet is the best to obviate, yet when it has proceeded to the length of inducing great debility, & the milk diet is the lowest we can admit. Indeed I have found it necessary to indulge in a higher state.

2^d Tho' in the first approach of the disease the Phlogistic Diathesis is chiefly to be avoided, yet the effects of Cold are also to be avoided, and the patient from his debility is more liable to be affected by Cold which determines the perspiration to the internal parts. I think it necessary to observe that milk

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Milk diet, as the intermediate, is the safest.

3^d. Another is to obviate Plethora by Bodily Exercise, but not admissible after the Ulcer has taken place, when it is once established Gestation is only admissible, and for another reason than that of obviating Plethora, which I shall speak of hereafter.

4th. When Plethora is formed Bleeding is the only remedy.

As to the IInd - as Phlogistic Diathesis, besides Bleeding, Antiphlogistic Regimen is necessary in all it's parts, and especially avoiding external heat as it is a stimulus and causes a rarefaction of the fluids. Cold also in great degree is pernicious. We know that Tubercles (in the warm climates in Summer) make a quicker progress in a few weeks than in as many years elsewhere. There is nothing more necessary than an equal state of Temperature; not below 56 deg: of Fahrenheit, and not above 64 Degrees.

Warm clothing is necessary. Phthisical people however generally go too warm; no more is necessary than a thin flannel shirt; but nothing is so commonly hurtful as warm chambers. It has been
alleged

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alleged that exertions of the Lungs will produce this disease, as loud speakers, singers, &c; but I am dubious if this is sufficient.

III. Indication, to take off the determination to the Lungs; which is chiefly done by Blisters and Ipec. Now this applies to the Phlogistic Diathesis I need not explain. I own I doubted whether I should not unite the 3^d Indication & 4th into one, as the means of taking off the determination to the Lungs is a means of restoring the determination to the surface. This is done by two means.

1. By avoiding a cold, and applying warm clothing, and a warm climate, this is avoiding a cold one.
2. To restore the determination to the surface, and in a wonderful manner, by various exercise; but Locomotion is the only one admissible. This may be of various kinds, as riding on horse back, in a coach &c, and sailing. The difference of all these you know.

Riding on horseback, so far as it is joined with a little bodily exercise, to be sure is the most effectual, and has the advantage also of a free air which is always necessary to take off the vapour formed round the body.

Exercise

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Exercise and cool air is found to promote Perspiration, by experience, more than a warmer climate.

Boerhaave found that skating was the most effectual means of promoting Perspiration, and many other proofs to the same.

Riding has all the advantage of air, above others, so that on many occasions I have found patients, who had a spitting of Blood when at rest, who were free from it on horse back. Yet there are Hemorrhages that will be increased by the jolting of the carriages &c.; But if not this, all exercise by land must not be by fits and at intervals, but in all exercise the most continued is the best, that by night & day, hence sailing is the most proper, which has also the benefit of the air. The Antients were sensible of this but the moderns have only lately been sensible of its utility. I however doubt if whenever Tubercle is formed it is ever curable, and I think that Phthisis is only curable when it is the consequence of pure Hemoptoe: I have however even in cases of Phthisis from Tubercle seen sailing protract life to a long time.

The determination to the surface we might expect to be answered by
Emetics

Emetics. Dr Bryan Robinson has alledged that Emetics are the best remedy for a spitting of blood. When a vessel is opened we should expect every increased impetus would be of hurt, and the straining in Vomiting we should conceive to be extremely prejudicial.

There was a Gentleman in this country who cured all diseases by Vomiting, and this among the rest. I am certain he practiced on 100 with impunity, & often with advantage; he has often told me of a particular case that the fifth Emetic exhibited brought up a membranous matter, whereby the disease was removed. There is only this possible means of cure, I can conceive; a suppuration taking place all around the Tubercle, which separates from the rest, as a Gangrenous part does, when in that case the membrane may be thrown up by Vomits &c; I can conceive it possible, but when we are to expect it or obtain it I know not, but it gives some encouragement to the practice of Emetics. - I have to add further that I have tried it; in some cases it was with safety; in one it brought it on much worse, which imprudently put an end to our practice of it.

Menorrhagia

* The extremities of the vessels must resist more than their respective trunks, else Accretion instead of Evolution would take place; the resistance is at last exactly balanced by the continual increase of strength in the vessels more than in their extremities; when further, evolution ceases, and the fluids must pass off by some excretory, hence by the uterus.

Menorrhagia.

This disease only consists in the excess or increase of that natural evacuation. Every thing we shall say will relate to the natural evacuation.

The Physiology of this I suppose is sufficiently known, but I shall just lay down the general doctrine.

Prop. 1. The Animal body is always in a Plethoric state, i.e., every fibre in the system is stretched beyond the stretching it would take if left without extending force, We explained the cause of this by the balance between the Secretories* and red vessels; we also said the inequality will take place till every part is thoroughly evolved and become in the balance with the rest of the system.

The evolution of the Uterus, in consequence of the general plethoric state, is obvious; but the Uterus once evolved and brought in balance with the rest of the system should remain as the other parts: the reason why it does not is, that the extremities of its vessels running through it, being short and liable to be opened by anastomoses, by the impetus of the blood, readily give way at the time the uterus is fully evolved and in balance with the rest of the system.

system; but if these vessels were only opened in consequence of the gradual dilatation of the vessels, the flux would be gradual & attended with no further consequences; but there is a congestion which occasions irritation, and does excite an encreased action, an hamorrhagic effort, in consequence of which their extremities open and the blood flows out. The evacuation of the Uterus is, attended with Horror and increased impetus as, other Hemorrhages.

2^d When it has flowed and evacuated a certain quantity, the depletion is chiefly of the uterine vessels itself. Physiologists who have asserted the doctrine of derivation and revulsion, have conceived our vessels to be rigid canals, and not endued with contractility, so that they conceived on the evacuation of a branch the whole system is affected; but in fact when depletion happens by the extremities, these contract & resist the impulse of the Blood from their trunks, so that soon there is not the least depletion in the more distant parts; hence the rationale of topical bleeding. Therefore the depletion is much more considerable in the vessels of the uterus than the rest of the System.

When

* meaning the opening or dilating of the mouths of
the Vessels.

When the Hemorrhage stops, matters are restored to their former condition, but the vessels of the uterus are now relaxed and not in the condition they wereⁱⁿ before the evacuation, but more relaxed, and the consequence will be their being unable to resist the impetus of the other vessels, & the irritation in consequence of that; so that their extremities are opened, and hence is^{the} cause why it is ~~is~~ periodical. The vessels however after depletion are more lax than before and therefore a determination happens to them, and at a certain degree of distension the Anastomosis happens as before and the menses appear.

In any after return of the Hemorrhage there is no occasion for general Plethora, partial plethora being all that is necessary for the periodical return of the Menstrual flux.

The Menstrual flux thus established, its regular return will depend on the partial plethora, and its periodical return will continue under considerable changes of the general system; suppose the system has a diminution or increase of several pounds; this must be regularly divided among the several parts, as in the ascending and descending

descending Aorta, the descending goes to the Mesenterics, the Iliacs, the Hypogastrics, yet what goes to the Hypogastrics has little effect on the system.

If a person suffers indeed the loss of excessive quantity, a change will be produced, but there is a reason for its having less effect on the uterus. The dilatation happens in the extremities of the vessels. The Hypogastric arteries are not sensibly increased in size in pregnancy, but considering what dilatation has been made in their remote branches it shews the changes that happen in the System affects the Hypogastric arteries but little; but the remote vessels will be considerably affected. Therefore the first evolution of the uterus can only be explained by its connection with the system, & hence the first eruption can only be explained by its connection with the system; but afterwards the uterus by its vessels being distended is more governed by habit. Every occurrence in the system do not return, yet the sensation & consequent effects regularly return ^{ex: gr: g} In urine if a person is always accustomed to make water at going to bed, the

The stimulus to excretion will always regularly occur, tho' he has evacuated not long before; so with the uterus it was a degree of distension that excited the Hæmorrhagic effort, and though the original causes do not act yet the power of habit will cause a return of the effusion.

The uterus is a separate system independent of the general system, depending on it's own proper balance of vessels and their extremities. It is only when the balance between these is not supported, when an accumulation in these takes place without eruption, then such an accumulation will considerably affect the general system.

These are the principles to be laid down of the natural Evacuation. We shall now consider it as a disease. Of these there are two species. Authors have included under Hæmorrhagia only the excess of the natural discharge, and have made the Abortion a separate Genus, we include both as Species, And first of the Excess of Natural Discharge.

1. Hæmorrhagia in excess of quantity. I find it is extremely difficult to say the limits; different systems require different standards. It is therefore to be considered in excess, when there is a greater discharge

discharge and this discharge continues a longer time than usual, and occurs after a shorter period. Even these symptoms will not be precise in determining it, as the constitution varies so, and women themselves make these allowances to the various constitutions. It is also to be considered by the morbid effects it produces. For instance, violent parturient pains, as weight in the loins & uterus, a shooting pain down the thighs &c, and considerable pressure on the orifice, and a further stage is, the debility of the several functions, particularly of the Stomach, paleness of face, and to the utmost when it produces Anasarca. These are the circumstances of its presence.

Its causes, which are now to be considered, are various. We may suppose it a general morbid plethora. 1. Those who use a full diet, little exercise, & much warmth, and the general state of the system always has some effect, tho' the uterus is in a manner independent of the general system, & hence to be observed.

2. Particularly the large use of Spiritous liquors. The fact is certain, for it appears that Opium (whose action is much the same) favours all congestions. Whether it relaxes the system or stimulates the larger vessels I know not. In Asia, among the Turks,
Rarefaction

Reaction seems to be its operation. I know instances of Opium increasing it in this country, & I never knew a Drunken woman but had all these appearances of morbid plethora, or an instance of its long continuance to 60 years but in persons who indulged in the use of Spiritous liquors, and where this Ailment happens you may very generally suspect a private use of them.

3.^d Cause, the original confirmation of the Uterus. The vessels in some are made with more density & capacity & hence admit of larger accumulation than others. — We always judge this by a more early appearance of them in life. There are women not remarkable in size & even of a delicate frame, who menstruate early and largely, ^{which} ~~and~~ is a proof of this confirmation of vessels, and it is certain the quantity is not in proportion to the rest of the System. When this confirmation happens it is little in our power to abate it.

4. This confirmation of Uterus is acquired by various causes; as in women who have frequently born children &c. If we consider to what a prodigious degree the vessels of the uterus are enlarged at the time of pregnancy it is no wonder that they are still enlarged more

+ which of itself will produce an uterine evacuation

more than in the virgin state.

5. By every means that gives determination of Blood to the Uterus. By Irritation, as Excess of Venery which has been prescribed when Nature has been faulty in point of determination. The Women of greatest Salacity have this evacuation most copiously. This Salacity arises mostly from an unusual determination of blood to the part, and, as it encreases desires, encreases the cause, and may be considered as effect and cause at the same time. We see this determination more evident in brutes, as Bitches' heat &c.

Another Irritation is a coitive habit, which most women are very liable to, which they often neglect till the faces become hardened, and hence a difficulty of evacuation, and always greatly encreases it.

6. A peculiar laxity of the extreme vessels of the Uterus, and these yield to a greater degree and ^{thus} give opportunity to a greater repletion. Now this happens I know not. - It may be referred to a want of Tone in the System, appearing in these vessels, because they are more employed. And we have reason to believe it acquired, Debauchery, Tedious & difficult labours, by which the vessels have suffered to an unusual degree. That there is such a cause we not only

only perceive from this, but this disease is commonly attended with the fluor albus. Where the vessels are sufficient to stop the red globules, but not to stop the serous ones, the general cause of Fluor albus.

These are the general causes of Menorrhagia.

Every large Evacuation should be endeavoured to be cured, as particularly I think it is a chief cause of barrenness, and that two out of three barren women may be founded on a laxity of extreme vessels.

The Theory of pregnancy is a matter of difficulty. I can conceive this effect; that the extremities of these vessels that used to yield to the accumulation, now resist for nine months. Now if these vessels have lost their tone, and cannot thus contract, such women cannot be pregnant.

Cure.

1st Considering it as a hæmorrhage, it will require the Antiphlogistic Regimen, and first the use of low diet - but here is an Observation. The hæmorrhages we have before considered are cases of active Hæmorrhage. The Menorrhagia is not purely active, as in the last case, which, if the sole one, would make it passive, and the passive hæmorrhage here is so far analogous to the active, and no increased impetus of the System. Yet the impetus of blood may

may be too much for the laxity of the extreme vessels, and the women themselves know this, and I have found it alone sufficient as a cure if the cause was from a laxity only.

The other part of the Antiphlogistic regimen, when the flux is present, whatever causes Irritation, avoiding bodily exercise, and even the effects of the gravity of the blood by a horizontal posture, As a part of the same regimen, Abstinence from Venery. This is certainly not to be neglected, when we prevent it.

Another Injunction is, Avoiding a Costive habit. Here powerful purgatives are not admissible. The habitual laxatives are only to be employed. Of these particularly I have found Sulphur the most effectual for the purpose. It will not answer to every body, but when it does I am satisfied it is by much the best.

II. Indication. To take off the determination to the Uterus—When the increased impetus & Inflammatory Diathesis is present;

1. I have found Blisters of service, but not to stranguy. But,

2. Exercise is much better; after the Menorrhagia is come on then Gestation is ^{not ad.} ~~only~~ admissible or rather inadmissible. Many

Many women observe of themselves that in gestation the menses are much diminished in quantity; and I believe in most cases of this disease, Gestation, as in Hemorrhage, is the best remedy. However in the time of menses it is rather ambiguous, and ought rather to be employed in the intervals.

There are other means to restore the loss of tone.

1. Cool Air, which goes far in supporting the tone of the System; and further the

2. Cold Bath, if it depends on a plethoric state, it is ambiguous; but if on a general loss of tone of the System & the uterus it is a principal remedy.

3. Another remedy which I have reserved is Bleeding. In pure active Hemorrhages it will appear a principal remedy, but less in the present case, as it seems a separate system, and I am persuaded this was the principal reason why Bleeding has been carried such lengths as twelve bleedings; because it is so unconnected with the system. It is only in case of more evident plethora and Inflammatory Diathesis prevailing that it is admissible, and so far is it from pure Hemorrhage that Bleeding rather promotes it.

Now we shall consider the medicines to be employ-

With regard to these I am quite uncertain. When the Paroxysms are to excess Astringents (as Allum) may be employed, but only for the present occasion, for however it operates it may easily be pushed too far. - But to be sure in the third, fourth, & sixth head of causes, in all these cases it may be employed, but more safely the Tonics.

Of these the chief are Chalybeates and Bark. We have frequently seen the good effects of both. I will only add, I think in the case of Menorrhagia there is no remedy more proper than the Chalybeate waters in a long continuance. But peculiar advantages are reaped from the dilution in water, because water is a chief means of promoting the serous excretions which prevents the plethoric state, & hence will pass off more readily by other excretions than the uterus which is disposed only to pass off red blood.

Cold water in the Stomach determines always greatly to the skin. - These chalybeate waters, with the advantage of cool air, & gestation I look upon to be the best Cure.

Leucorrhoea

Leucorrhœa, or Fluor albus.

This term is employed for every discharge from the Uterus; but there is certainly a great difference in them; viz

1st As it comes from the Vagina; or 2^d Uterus.

Each of these may be again subdivided. It may be merely a mucous discharge from Ulcers &c. — We shall only speak of the Serous or Uniform discharge proceeding from the same vessels, as pour out the Menses. This is often of a clear watery colour, and often also of various colours & degrees of fætor.

There is reason to believe the Serum from these Orifices is capable of being changed into Pus, and from different dilatation may put on various appearances, as sometimes a small quantity of red blood with it. I can say in general of this particular flux, that it is nearly connected with the Menstrual discharge, by

1. It's appearing in those people that are liable to a copious menstruation.

2. It's commonly appearing at the beginning, and most usually at the end of the menses, as the red discharge goes off the white discharge comes on, as

as we suppose the red vessels are then sufficient to retain the red globules but not the serous. This then often anticipates the Menses, and often even substitutes itself for it, because then the vessels will not allow of sufficient dilatation.

3. Because it often occurs without symptoms of Topical affection.

A. Also when attended with parturient pains, as in the flow of the menses, which seems evidently to show it proceeds from these vessels, and when it has continued it has a sort of Paracysm the same as the Menses.

Lastly, it is accompanied by various affections of the Stomach. Now by these several marks we seldom fail of distinguishing the proper Fluor albus.

[There is a book published, called Tract. des Fleurs Blanches, in which the author gives a System on this subject; he has many subtle distinctions which I am not inclined to admit. I think the facts on which these are founded, are extremely doubtful. He endeavours to establish a communication between the Lactæal and Uterine vessels, which is not anatomically just; and from this principle, though false, he draws many conclusions which must also fall to the ground. In short I am not at all inclined to pay the least attention

attention to this author.]

That the *fluor albus* depends on a Laxity of the Orifices of the extreme vessels, as I flatter myself it will explain most of the Phenomena, and from the causes that produce it, that whatever can occasion a greater flow of the Menses (when it depends on a laxity of the vessels of the Uterus) may give a *fluor albus*. Hence the cure must be extremely difficult, as the Tone is lost only in one part of the system, especially if it be without the reach of external application. In short the cure is fundamentally the same as the *Menorrhagia*.

1. Avoiding all increased Impetus in the vessels of the Uterus & Aethoric state.
2. Taking off the determination to the Uterus.
3. To restore the tone of the vessels by Tonics and Bathing.

II. Abortus.

The Theory of pregnancy is extremely difficult in most particulars. The case of Abortion and all its consequences cannot be made very clear, but we can go certain lengths useful in practice.

I assume this simple fundamental doctrine, that it depends on the continued Inosculation of the Uterus

uterus and Placenta.

1. That this may be separated by the increased Impetus, or,

2. may be separated when the Extremities have not sufficient tone to support the usual accumulation; and that Abortion will depend on these two.

This brings our speculation into a short compass. —

The Causes are

1.st Whatever may increase the Impetus of the Blood, as Violent Exercise, &c. — These we need not repeat.

2.^d May depend on internal causes inducing weakness or loss of tone in the extreme vessels — Hence Abortions most frequently occur in all those that labour under Menorrhagia or Fluor albus.

This reduces the Theory of abortion to the same principles as Menorrhagia.

The only difficulty is to know when it depends on the Increased Impetus, and when on the Loss of Tone.

When any symptoms are present a Low Diet is universally necessary; for the most part Nature points out this, as pregnant Women ^{being} ~~are~~ subject to Nausea ^{have} ~~and~~ a desire for Vegetables, as Sallad, ^{before}

before unknown to them perhaps.

Another means universally applicable, when Symptoms appear, is avoiding all bodily exercise. Thus, keeping a person almost always in bed, is often necessary and effectual. At the same time nothing is more necessary and useful, than frequent Gestation. I have known Women using moderate Exercise escape Abortions by it, who, when indolent, are subject to it.

I need not ^{add} avoiding all Spiritous Liquors & Bodily Exercise. But in ^{if} other remedies, if Symptoms of Turgescence or Symptoms of Inflammatory Diathesis or increased action of the vessels of the Uterus, in all these cases Bleeding is a necessary Remedy. But on the contrary when there are not these Symptoms but a laxity suspected by the flaccidity appearing in the System, here I have known an Abortion brought on by Bleeding. The Bleeding tends to diminish the tone on which the Inosculations entirely depends. This is the nicety of Bleeding to know when it is necessary and when not.

I have known the Cold Bath practiced. In the last case only it may be useful; but in the first rather pernicious. As to

Astringents

Astringents. They are in general of little efficacy, except in that single case of great lacity.

The Bark I have known employed with advantage, and also have seen it employed with mischief. Whether it is necessary to be used or not you may see by observing the two causes.

Now we shall proceed to the ceasing of the flux when it ought to flow, viz.

Amenorrhoea

[Decorative flourish]

Amenorrhœa.

Sauvages, from a Logical refinement, has omitted this as a negative disease, but I alledge it to be a positive one, and it is impossible to consider many diseases without admitting such. Sauvages himself has admitted many diseases with negative characters as in his *Debilitates*. I have put the Amenorrhœa among the *Locales*, but as it is as proper here it is especially necessary for us to contrast it now.

I must say they are cases different both in Theory & practice. They are marked of two kinds under the heads of

$$\begin{array}{l} \text{Emanatio} \\ \& \\ \text{Suppressio} \end{array} \left. \vphantom{\begin{array}{l} \text{Emanatio} \\ \& \\ \text{Suppressio} \end{array}} \right\} \text{Mensium.}$$

The former relates to their defect at the ordinary time of coming on. The latter relates to the casual suppressions of them. As to both they must depend either on the want of the Uterine plethoria or a want of tone sufficient to force the blood thro' the extreme vessels, and also where this action is given & does, not take place because of the resistance in the extreme vessels - which may be from two causes.

1. From Viscid fluids obstructing the Orifices of the

extreme vessels.

2. From the Constriction of the fibres of the vessels. —

As to the first; the Theory of Viscidity is still hypothetical.

As to the second, it is evident in fact, when we consider the effects of cold & fear causing it. — These are generally the causes. The first set give the Emansio, the last the Suppression. We are now to consider, first, the most difficult; the

Emansio Mensium.

The time of the Eruption of the Menstrues is different in different people. This variety may depend either on the original Conformation of the Uterus, or of the slow growth of the System. The Emansio depending on this last is not a disease. — Or, it may depend on the slow growth of the Uterus to the rest of the System, and hence no evolution of the Uterus which may produce morbid symptoms. Morgagni has given many curious observations of the fatality of this last case — It is a disease that is only to be cured by length of time. — I have said it is of two kinds,

1. Defect of Uterine Plethora.

2. Defect of tone to overcome the resistance of the extreme

extreme vessels. — It is difficult to distinguish these different circumstances, and when they occur. — We may always conclude the last when there is a manifest flaccidity of the whole System and what is called a chlorosis. When we observe this circumstance we may readily conclude this loss of tone; but whether to be considered in this view is extremely doubtful, whether this chlorosis is a cause or effect; we suppose it an effect when it happens at one time of life only, but if we do it is difficult then to find its causes.

I must observe that in both sexes nothing is more obvious than the connection the genitals have with the rest of the system. Its causes are extremely difficult. Why is the Vesiculae seminales and the Ovary connected, why is the voice altered &c? There is no doubt but the Ovaria is the same, and affect the whole system in the same manner. Now there is a certain state of the Ovaria which gives a stimulus to the system at a certain period. If this is wanting Flaccidity, and chlorosis is induced.

This is the best explanation we can give, for we cannot trace it to its ultimate causes, & consequently we cannot apply remedies, and here we must as in many other cases be content by obviating its effects.

(ure)

Cure.

We can only obviate this loss of tone in general by restoring the tone of the system and particularly to the uterus itself. This is effected by Tonics, Chalybeates, Bark, and Cold Bathing in particular.

Exercise also to restore the tone and determine to the Extreme vessels. — Friction also to the lower Extremities, by Warmth & Semicupium. This last use might expect to relax & do harm, but it being so short does more good, by a Stimulus to the part, than harm by its relaxing powers.

Other remedies have been mentioned under the title of Emenagogues. I own I am at a loss to speak of them. I know none that are specifically such. — We can find that Aloes, by accident, have had influence; but I suppose its action is merely from stimulating the Rectum which has so near a communication.

As to the Fetid Gums, they are some what of the same quality with aloes; but farther, that any of these have had a power to stimulate the uterus there are no observations to point out.

Various fetid plants &c. have been proposed as Antispasmodics. There are cases where it depends more on the constriction of the extreme vessels whenever
Opiates

Opiates have their place; Antispasmodics however here in these two cases have no place. Constriction is more frequent in the

Suppressio Mensium.

As to this I observe that the habit of the Uterine Plethora once established, is not liable to be altered, by considerable changes in the system, and therefore while the Emansio may depend on this, the Suppressio does not depend on the causes of the System, ^{in general, but} I am ready to conclude it depends more on the constriction on the extreme vessels, and from its causes of cold & fear, and that it is an affection of the Nervous System, and from the effects produced by all affections of the Mind. These are all proofs of its depending on such Constriction.

We have reason to suppose the Uterus a distinct system, and that affections of the Nervous System particularly operate here. Now as there is a constriction produced it will be extended more or less over the whole Uterus; but there is a suspicion that it is to the extreme vessels only. As we have many instances of constriction over the whole system which have no effect upon the Uterus, I take notice of its being on the extreme vessels as our remedies are chiefly directed to it.

In some Women the Menstrues only flow in Summer, & are constricted in the Winter. This may be an ambiguous Argument, as it may be either from a loss of vigour in the System, or from Constriction. Suppressions most frequently happen in weak people, hence it soon ceases with Phthisical persons, and often in diseases that give general Atony.

When thus depending on the System, Suppression is to be treated as Emansio. When it happens from Constriction of the Uterus, the practice turns as in the other case upon increasing the impetus of the blood in the Uterus, and particularly those remedies that restore the vigour to the Uterus especially. For this last purpose, I need not mention the use of Venery.

Whether are any other Simulations to be admitted? It may be a question whether Piscaries or Injections, according to the ancients, are proper. The manners of this country prevent me from trying it; Good practitioners have recommended them. — I should fear Acid Injections might inflame the Os Uteri before it excited the whole. I have found no benefit from the directions of a great practitioner of sitting over warm water impregnated strongly with Volatile Alkali.

But supposing it depends on the constriction of the extreme vessels entirely, as it very often certainly does, we have few means to take off that constriction, and the practice turns upon our overturning this, by increasing the Impetus of the Blood, as by Antispasmodics. How much Emmenagogues act as Antispasmodic I cannot say, but they more frequently act as Stimulants.

One observation further, as to the Time of exhibiting Remedies; in so far as it depends on a loss of tone. These remedies (Tonics) may be used at any time and must be continued for a long time; but as Stimulants that affect more immediately & suddenly, whether Semicupium, Pediluvium, water Glysters, or Acrid Purgatives, all these are much limited as to time. To take the middle space of Menstruation would be lost labour; in short they are only to be used when Nature co-operates with us, and when the Suppression depends on this resistance. It is only, when the System makes an effort also that we have reason to expect success.

I observe farther when the suppression has continued through the winter, the summer often brings it on, but you will find it useful to trace back even

even months for the usual period in order to assist it.

You will be surprised I have not mentioned the pressing of the Aiac Artery. I do not know where the fallacy lies, but I suspect one, as I know 10 or 12 cases where they have been applied without sensible effects. It is doubtful whether it affects the blood so far up as the Uterine vessels, but I cannot say that I ever saw any bad effects from it. But this is more especially to be confined to the time of the flow as a continuance of the pressure might be attended with very bad consequences. There is a peculiar nicety here. The constriction of the extreme vessels may be a simple Spasm that is not connected with the rest of the system: But it is more common to be more general, and attended with the Phlogistic Diathesis, and hence efforts will then be made in other parts of the System.

When it induces this Phlogistic Diathesis it always seems to render the Spasm more obstinate. — When I can perceive this & it endeavours to produce Hemorrhage in other parts, then Bleeding is the only proper remedy to relax the Spasm, and now every Tonic power will be hurtful. But if it be not extended to the whole System, then tonics and
stimulants

Suppressio Mensium. 357

stimulants may be useful.

This is the means of determining a question in practice, viz, When was Bleeding a remedy to be used? Physicians have considered it in another view, they consider it as a power of derivation, and hence Bleeding in the foot. — But, as far as ever I have observed, the success is better in the arm than foot, as ~~that~~ sudden relaxation, the chief effects of Bleeding, is much more easily obtained there.

Hæmorrhoids
Pere

Hæmorrhoids.

This I reserve to this place, as being a Venous Hæmorrhage: respecting this there is a peculiarity. The Blood here is not poured out from vessels formed by nature so as to admit a dilatation as by Anastomoses, neither is the blood poured out in consequence of a rupture of vessels, i.e. the vessels of the Rectum are not laid so superficially or so slightly covered by membranes as to be exposed to the Hæmorrhage, as occurs in the Hæmorrhage of the nose. The case may happen to the Hæmorrhoidal arteries; but in general the blood is poured into the cellular texture, and it is only in consequence of accumulation there that the Rupture and Effusion are at last produced. It is only in consequence of little tumours arising about the Anus that the rupture occurs.

This being premised, I observe from the appearance of these Tumours, as they appear lax, flacid, and livid they have been alledged to be only varicose swellings of the veins. Haller speaks of them as such, but the veins there affected are too small to admit such a state of Tumour and distension as there occurs. They are not however lax and flacid, and in reality

reality are effusions into the cellular texture that become pretty firm and hard. They are an effusion into the cellular texture simply.

Whether this effusion is made from a Rupture of the Arteries or Veins is also disputed. As to its coming from the Arteries there is some difficulty in finding what difference in the balance of the System could occasion this. There is here no habitual plethora that had occurred during infancy and laid the foundation for the Hæmorrhage, as of the nose; nor any peculiar connection of the Hæmorrhoidal Vessels with the rest of the system sufficient to change the balance of the Hæmorrhoidal vessels. It is probable then it is not Arterious, nor does it occur when the Arteries are in their plethoric state; it only occurs at the time of life when a Venous plethora has taken place, and when the Blood in these is accumulated.

From these considerations I conclude that the Hæmorrhoidal flux is founded upon a Congestion formed in the Veins. There are however difficulties attending this to suppose not only an obstruction but a regurgitation of the Venous blood to force open the exhalant vessels.

The

The quantity of Blood accumulated cannot be considerable as the vessels are small. From a compression indeed of the larger venous trunks there is room for a compression in the veins themselves; but if it is in a smaller portion of the venous system the Blood may escape by Anastomoses, or if it regurgitates by the Arteries, it will pass off by the exhalants.

If we suppose it to be the stagnation of the Venous Blood, it must prevent a passage to the Arterious blood, and this must occasion Congestions in the extremities of the Arteries; hence the exhalant Arteries will be obstructed as their flow is principally derived from the Arteries. There is a direct communication of the fluid from the Arteries to the exhalant vessels, so that it more probably arises from the impetus of the arteries than from resistance in the veins.

The Congestion in the Venous System proves a Stimulus to the Arteries, and occasions the Hæmorrhagic effort, so that tho' the Congestion is originally in the Veins, yet the effusion is owing to the Arteries and arising from them. I conclude that the effusion is from the Arteries because there takes place before the flow of the Hæmorrhoids a sense of weight, pain, and Vertigo, difficulty of breathing and

and if the person is liable to Asthma it is brought on by the approach of the Hæmorrhoidal Bleeding at the nose &c.; which is a sign of it's being an arterial Hæmorrhagy.

The flow of the Hæmorrhoids is attended with all the signs of actual Hæmorrhage in the ^{of the System} parts, as with Pyrexia; and Fever often arises here and all the symptoms of an Inflammatory affection of the part.

Dr Storck has given us a Febris Hæmorrhoidalis; he certainly has pushed it too far, but I have observed the Hæmorrhoids preceded with several days formed Fever. - If these symptoms do not occur then we may account for it by the Inflammation being more topical or ^{less} general.

The foundation of the Hæmorrhoids then is at first laid in the Venous congestion, tho' it be properly arterial; and we must therefore trace the ~~origin~~ cause of this venous congestion. I have said it took place at that period of life when the Venous Plethora takes place, and from the slowness of the blood's motion in the vena portarum it will occur. Let us consider what will be the effects of a Plethora in the vena portarum: It will certainly give residence in the extremities, and if the exhalants have suffered Atonia such

such a congestion in the Vena Portarum will naturally produce Ascites; but if the extreme vessels have their due tone, an accumulation of red blood will occur in the several venous extremities of the Vena Portarum; and hence we often see congestions thro' the whole Alimentary canal; effusions of Blood from the stomach to the Rectum.

The whole then may be explained in this manner, that it is a venous congestion occurring in the extremities of the Vena Portarum, communicating with the external surface of the Alimentary canal. — If then there is a congestion in the Vena Portarum it will necessarily take place in the most dependant part of that system, the Rectum; which on account of its lax cellular texture so readily admits of these effusions.

I have as yet considered the Hæmorrhoidal flux only as a disease of the System; but the Hæmorrhoidal swellings do arise from an occasional and topical state of the parts without general affection. The Hæmorrhoidal vessels are liable to compression from hardened feces in voiding the Stools, and this will produce a congestion in the veins sufficient to excite in the Arteries the Hæmorrhage

which we speak of. Schirrosities & Stone in the bladder are often the causes of it; so likewise the gravid uterus pressing on these parts will occasion the hæmorrhoidal flux; and this often accounts for the hæmorrhoidal flux occurring before the Acme and early in life. It seldom happens in this case, but in a coctive habit, in some this may produce the hæmorrhage earlier than others, as in children that have Prolapsus Ani. The hæmorrhoidal flux then occurring early in life must be imputed to one or other of these topical causes. Much less frequently, therefore than the Stahlians suppose does it depend on the Plethoric state. I likewise say that it more frequently happens in the female than in the male sex, contrary to the opinion of the Stahlians who maintain the contrary; in Females this disease cannot be imputed to Plethora except when the hæmorrhoidal flux does not occur till after the time of menstruation is passed. As therefore we see that in women it is not owing to a plethoric state, we know what it must be owing to; for the female sex are generally liable to coctiveness and very apt to neglect it and allow it to go to excess, and this is a reason why they are so liable to the hæmorrhoidal flux.

Pregnancy

Pregnancy too frequently occasions the swelling of these veins and their consequence, effusion. Thus it depends on Plethora and on Topical affection.

The Hæmorrhoidal flux once become frequent from whatever cause is liable to become habitual, even periodically so. The Strahlmans have been fond of marking this as a frequent occurrence, it may happen in 200 or 300 cases. I can only recollect three in whom it was periodical; but with no such exactness of period as the Menstrual flux. It may be habitual I say, and may form a connection with the general system which it had not originally.

Cure.

Is a Cure to be attempted? It is only here the question occurs.

The Strahlmans here have pushed their System to excess, for they not only are at no pains to suppress it, unless in very great excess, but often solicit it where it does not occur. All the Schools of Physic have much agreed we should be very cautious to suppress this, where it is become habitual. De Haen, who was bred up in the School of Boerhaave, when he went to practice at Vienna, found the Physicians

Physicians practising on this principle with bad effects, as he thought; and he has endeavoured to disallow the practice in his treatise *De Hæmorrhoidibus*. He is the most intelligent writer on this subject, and deserves your perusal.— I shall endeavour to compromise the several disputes.—

1. When the Hæmorrhoidal flux arises from a Plethoric state in the System in general & *Vena Portarum* in particular, there may be some doubt in suppressing it; but when, as in the second case, from topical affection, there can be no doubt of our endeavouring to get rid of it immediately.

2. From whatever cause it ^{may} arise, when it is once become habitual, then the sudden suppression of it may be very hazardous; but the preventing such a habit is to be much desired; and hence we should endeavour to cure it on its first appearance.— When it depends on a plethoric state we are to attempt the cure by taking away the cause, the Plethoric habit, and, when we can obviate the occasional returns of the Plethoric state, the cure will be sufficiently safe. The danger and difficulty will be greater as the disease has subsisted longer. We ought then to guard against the first appearance of

of the Hæmorrhoidæ flux and endeavour to obviate its return, notwithstanding its popular prejudice, we should even when it has subsisted some time, by obviating the Plethoric state, lessen it or take it off, and likewise by strengthening the tone of the particular parts by which its return is favoured. The cure in general therefore is to be attempted; for though the disease is often salutary, yet it is a very precarious means of procuring health. It is liable to many accidents and is disagreeable to excess.

The Cure turns,

1. Upon guarding against the Plethora, and this even extends to those cases that from topical affections are become habitual. This is to be done,

a. By the use of a more spare and perspirable diet.

b. By obviating Congestion in the Vena Portarum, which is to be done by Exercise. This is curiously illustrated by Dr Bryan Robinson who observed that Game cocks, as they are high fed, have their livers much enlarged. When the Swellings are present and the flux has taken place, then Exercise would aggravate the disorder, and is to be avoided, but in the interval we use it safely.

c. Avoid

c. Avoiding all Irritation of the particular parts, a costive habit especially.

In many persons liable to a considerable discharge of Blood this way, it seldom happens, but when they go to stool. From this then it will appear how necessary it is to render that excretion as easy as possible, by having a lax belly; and this is to be done

1.st By Diet.

It is sometimes difficult to execute this properly. Broth and Vegetables mostly do, but sometimes fail and occasion costiveness; but this is seldom the case. By changing about we may frequently at last find a Diet that will have the proper effect.

A Gentleman of my acquaintance, who for 20 years past was liable to frequent and almost constant Hæmorrhoidal flux, was, upon account of a disorder in his lungs, (which however was luckily cured) led to live upon a vegetable diet, which he has now adhered to for two years, and with this effect that his belly, which before was sometimes bound sometimes large, is now constantly lax, by which means he has got rid of his Hæmorrhoidal flux.

2^d By

2.^d By Medicines.

Purgatives of all kinds produce a secretion of Mucus which in that state irritates the Rectum much. Most purgatives therefore contain an Acrimony not easily corrected in their passage thro' the Alimentary canal, and this is particularly the case with Aloes, nor can we dose them in such a manner as to have but one stool a day, and we can seldom give them without their producing several stools, the consequence of which is that they produce costiveness afterwards & thus give occasion to their being repeated.

Rhubarb, in a costive habit, is very bad likewise, and it leaves the body under a state of Constriction; hence we are confined to a few Lavatives, or, as they are called, Ecoprotics.

Sulphur is the best I know of. In a moderate dose it will produce one stool and no more. I know many Hemorrhoidal persons kept at ease merely by Sulphur. In many, however, it does not succeed, and therefore we must have recourse to other Medicines, as Neutral Salts, but these are liable to the Objections made to Purgatives. Glauber's Salt however, from one to two Drams, will frequently

frequently answer the purpose.

Oil will answer well in some persons, in pretty large quantity, to four ounces, given daily.

Ol. Ricini, half a Spoonfull, or a whole Spoonful, will answer the effect of Sulphur in giving this single stool; and after it's use for several days it may be intermitted for several days without any bad effect.

All the Fresh Fruits, Casia, and Tamarinds are officinal remedies in this respect.

Oranges and Apples will often do.

In some habits these will be all rejected. —

When once the Hæmorrhoidal Swellings or flux are become habitual to the System, they acquire a regular connection with the System analogous to Gouty persons, for, as whatever lets down the Tonic of the Stomach in Gouty persons brings on the Gout, so in the same manner it brings down the Hæmorrhoidal flux.

I know several persons who cannot drink a pint of claret without having the Hæmorrhoidal flux next morning. The fruits, too, often have this effect.

I

I should say something with regard to the several accidents that happen in this disease; but, as they are to be met with in every author, I need not mention them.

Order V

Profluvia.

Profluvia.

All the Systems of Nosology have a class analogous to this; Vogel has a class under the same name; Sauvages under *fluxus*; Linnaeus under *Evacuatorii Capitis*. But all their classes are founded on the single circumstance of increased evacuation, but this can never form a natural class or order.

Classes must unite diseases in themselves totally opposite; Thus Sauvages unites the *fluxus Sanguinea & Serosa* together, without making any distinction between active and passive Hemorrhagy, and does not separate such as depend on fever and such as are Spasmodic, and the Idiopathic and Sympathic have been constantly confounded together.

I have chosen these Genera, as being in their nature of the febrile kind; the others I have referred to the Neuroses & Apocrenoses.

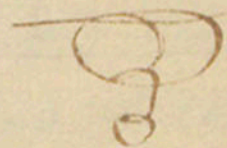
The Profluvia differ from the Hemorrhages in

in the Congestion that occurs in these last; there being no change in the balance of the System in Profluvia.

Another distinction: Hemorrhages are without mortific matter, but are attended with congestion; the Profluvia, on the contrary, are without Congestion & with mortific matter.

I have only brought in the Catarrh & Dysentery among the Profluvia.

Catarrhus



Catarrhus.

This is evidently an increased secretion of Mucus, and this may take place in different parts, but we confine it to the Membranes of the Nose, Fauces, and Bronchia; this forms our character. I did mean to comprehend under the same Genus the Gravello, and even the Dry Cough. Respecting the different parts of the Nose, Fauces, or Bronchia, the affection has been called by different names from the different situation of the affection in those parts.

Sauvages in his nomenclature has been superfluous, for Genera should never be unnecessarily multiplied. —

The fundamental character consists in a manifest determination, and increased affluence to the mucous Glands. It is a Pyrexia, not indeed in its formation, but we may allow for its being topical or more general, and as such give more or less of Pyrexia. (not indeed in its formation &c) There is also a Diathesis Phlogistica attending it, and the same appearance of the blood occurs here as in Phlegmasia. If it is considered as a true Phlegmasia

Calamities

* Valerio de Jaranta gives an account of an universal Calamity in the South of France in the same year.

you will not be mistaken; but there is reason to believe that there is always a peculiar morbid matter, that

1st In many cases is a foreign matter introduced into the body, and here affecting the Mucus by Assimilation; Or,

2^d As depending on particular determination, from obstruction in other Emunctories.

Respecting the first we know it by the disease being so frequently Epidemic, and from hence manifestly contagious and one of the most universally spreading ones. — Catarrh as being contagious is generally Epidemic; lately such Catarrhs have been called under the title of Influenzas.

But these Epidemics are not confined to modern times, for, in 1387,* Morgagni mentions an Italian historian who mentions it's being precisely at the same time of the year. I could give many instances of it's occurring long before this, but as no Physicians lived in those days the histories of them are lost.

In the year 1733 there was an Epidemic Catarrh that spread all over the North of Europe and even to America.

The Morbific matter may operate in two ways.

1. It may produce Fever; Or,
2. It has a particular determination to the Mucous Glands, and there produces fever, by inflaming these Glands by it's acrimony as Mercury does the Glands of the Mouth.

Besides Contagion we know of no other means but obstructed Perspiration sufficient to produce this disease. In case of Obstructed Perspiration the perspirable matter is determined in greater proportion to the Mucous Glands, particularly to those of the Bronchio because these have a vicarious preparation.

It often however appears as Sporadic, but it is possible this Contagion can be so weak as not to appear without the concurrence of Cold. Hence when a Catarrh is present in a family we may be dubious whether a Contagion, or cold only, occurs.

The perspiration is a Vehicle for this contagion, and in the Summer the Contagion takes the course of the perspiration and goes out of the body. This accounts for it's constant occurrences in the Winter season, and it's particular determination to the Bronchio.

When

When the disease arises from Contagion it is very mild, and seldom violent or durable. This last circumstance deserves attention; it is either because Contagion in general soon passes out, or is washed from the body by the circulating fluids; and, a fortiori, this, whose Vehicle is the perspiration, is easier washed off than any other species of Contagion.

If it was not for its assimilating powers of converting our fluids to itself it could never so considerably multiply; but this assimilation is confined to one time of action, for it is insufficient to affect the same System twice; perhaps our nerves also will not suffer a double infection.

In most persons the Epidemic Catarrh is a mild disease: Only two Exceptions to this,

1. Where it falls upon persons whose Lungs shew a previous disposition to Tubercles.

2. In elderly people. —

In Elderly persons it frequently brings on a Peripneumonia Notha, or a Catarrhus suffocatus, as Morgagni terms it, by the quantity being determined to the Lungs; but it seems to act by inducing a paralytic affection of the Lungs, i.e., an Atonia of the Bronchia, in consequence of this the affluence proving

proving suffocating.

Cure.

1st Indication. To moderate and take off the Inflammatory Diathesis. This is to be done by Bleeding. In young persons Bleeding may be tolerably well urged; but in old people we must be cautious.

2^d Indication. To take off the same Inflammatory Diathesis, and take off every determination of Inflammatory Diathesis to our fluids, or of fluids to the Lungs; chiefly by Blisters, which is the remedy chiefly to be depended on in elderly people.

3. Restoring the Perspiration. This may be done by Emetics. If in elderly persons there is an uncommon afflux of viscid fluids difficultly thrown off; Emetics are the most powerful expectorants we are acquainted with, and are even good in elderly persons where a considerable peripneumony appears, and the consequence by these are more effectually to be obviated. The perspiration may also be restored by Sudorifics & Diaphoretics; on which I have given you my remarks. There are few cases under which we have a stronger temptation to attempt their use, and the common people frequently obviate Catarrh by this means. Sudorifics if properly

properly administered without the use of heating medicines, or excessive warmth may be excellent; but whatever Ambiguity may occur, it is here in the application of Sudorifics highly necessary to avoid external cold. There is an Inflammatory Diathesis accompanying it, and hence external cold is highly pernicious also as suppressing the Perspiration; under this Inflammatory Diathesis Men acquire a singular sensibility to cold, and hence confinement & warmth are sure remedies for obviating it.

Morgagni, in his practice, mentions an Epidemic Catarrh about the year 1730; he tells us of an Archbishop at Padua that died of this Catarrh. Morgagni himself was seized, and treated himself by drinking mild liquors; taking care however not to overload his vessels till he saw whether it produced a tepor of the skin. - Vide Morgagni.

I am persuaded the bad consequences of Sweating have arisen from a sudden exposure to cold before the Temperature of the System was decreased.

Dysenteria

Dysentery.

We are to distinguish this Genus from all the Species of Diarrhea. Physicians universally, have thought it sufficient to distinguish it by different degrees of Griping, Tormina, Tenesmus, &c. that occur; but *maius et minus non variant speciem*, it is merely a difference in degree. Others have had recourse to the bloody stools as a distinction; but this is by no means characteristic, for this symptom is not always Pathognomonic.

There is no circumstance we can fix upon better for a distinction than it's being a contagious disease, and generally proves Epidemic. Our character therefore must be taken altogether - I say it is necessary to attend to this circumstance of the contagion by tracing it up to it's source, the foreign matter introduced. As it is a contagious disease it may appear at any time; but the ordinary appearance of Dysentery is in the end of summer or beginning of Autumn, the season when the Bilious constitution occurs. It generally occurs with the Marsh fever, hence we suspect the same source as the Tertian fever. Bingley
Leghorn

Cleghorn & alledge this to have a particular connection with the marsh ^{fever}. There must however be some difference, and it is probable a peculiar state of the bile concurs with the miasmata to produce the Dysentery, and this explains the time of the occurrence of Dysentery about the time when the Bile is in a peculiar condition & in great abundance.

The marsh Effluvia do not at the same time produce the fever, for Dysentery and Fever are seldom combined. Lind says if we can avoid the marsh Effluvia we shall avoid the Camp fever, and on this is founded his prophylactic. And indeed the Dysentery may arise at any time from a certain degree of heat, (of heat) and the application of Cold afterwards even in the driest places.

If Dysentery arises from Marsh Effluvia the operation of that Marsh Effluvia must operate very different. We must suppose that under a certain degree of heat our bile suffers some change by which it overflows, and becomes very stimulant to the alimentary canal; and the Dysentery appears at the season of Cholera when the Bile is

is in this condition: Dysenteries from Contagion may appear at any time; but never, except by Contagion, does it occur but when Cholera has preceded.

One particular circumstance is, that the heat and dryness of the season seldom produce Dysentery unless Cold is applied to the body, and seldom without a fall of rain exposing the body to coldness & moisture, lying out in the wet, and any causes obstructing perspiration are the Occasional causes of this disease.

We must now consider how these causes operate in producing the proximate causes of the Disease itself.

The disease begins with fever, at least with very few exceptions. Dr Aikenside alleges it never occurs with fever, ~~at~~ least with very few exceptions but this by the general testimony of Physicians is condemned. We have no difficulty in accounting for fever, as we admit it to arise from Contagion. Notwithstanding this however the determination to the intestines is the chief circumstance of the disease, and when this has taken place the fever often entirely disappears. This

This I explain from the topical reaction taking off the general one. Tho' the fever is absent, the skin continues dry and constricted.

The operation of the morbid matter in the alimentary canal is the chief object of our enquiry. The most common reasoning on this subject is that the acrid matter determined to the Intestines stimulates these, and hurries on the peristaltic motion, and at the same time stimulates the glands, & hence the whole Intestinal excretions may be increased, and their frequent evacuation becomes an unavoidable consequence; but this is far from being perfectly clear.

If the disease continues for a day or two, the Stools become more frequent, but less copious, & infinitely less than what a common purge produces. These frequent stools commonly consist only of a little mucus sometimes bloody; and seem only to proceed from the mucous glands of the Rectum itself. The ordinary feculent contents of the Intestines by the increased peristaltic motion are not carried downwards, for only on the exhibition of a purge are they evacuated. — The intestinal excretions cannot be liquified or broke
down

down so as to pass in a diluted state; for we see they are retained, and they appear by giving a purge in the form of very hardened scybala. Thus therefore we perceive that the increased peristaltic motion is chiefly confined to the Rectum and lower part of the Colon, and that a great part of the Colon must be under a Spasmodic Constriction, which is what retains the feces in the Cells of the Colon and there forming these Scybala.

Whether does the cause of the disease produce one or other of these appearances? Respecting this I am of opinion that the cause of the disease produces only one of these set of Phenomena, viz, the Constriction; and that this produces the other; for let us by purging remove the constriction of the Colon, and we resume the Tormina, &c.

So far I have proceeded on matter of fact, and the facts I have given will be sufficient to found our Method of Cure.

I think then, first, That the Colon is under a constriction, such a constriction as divides it into small cellular spaces as divide the feces into Scybala, and that at the same time there is an effort to carry on the Peristaltic motion, but this is only

only such as to render the constriction more strongly spasmodic, and therefore painful; and its effect is not sufficient to overcome the spasm and push out the faeces. I conceive that it is, however sufficient to propagate some oscillations in the course of the Proctum, and there produces, that constant effort we call the Tenesmus.

We may ~~then~~ see how such efforts may emulge the mucous glands and with the same force squeeze out some blood from the superficial blood vessels. In many cases these circumstances are attended with more or less of fever, probably as the marsh Effluvia have concurred to produce it.

The disease is also attended with more or less of Inflammatory Diathesis; but this is only an effect supervening in consequence of the constriction so violently taking place, especially in the great guts.

Lastly, The disease is attended with more or less Symptoms of putrefaction, which depends upon the marsh effluvia that has this tendency. This may arise too in part from the Bile which in some circumstances will be more disposed to a putrid ferment. I take no notice of the

Pustule

Pustules lately observed upon dissection here in the great Intestines, for these I think are only effects of the disease supervening in consequence of the Inflammatory state of the great Intestines or putrefactive course the disease is liable to take.

Cure.

From the nature of the disease the cure must consist in removing or obviating its Constriction which is the cause of the painful excretion & tenesmus. This must be done by Opiates & Purgatives. — The necessity of these last has been presumed from their being requisite to evacuate the Morbific matter which is the foundation of the disease. But the retention of the feces is a better reason for the practice — but the proper reason is to overcome the constriction in which the disease consists.

Respecting the morbid matter I am uncertain if it has any foundation. The evacuation of morbid matter, as it affects our fluids, may be commonly left to nature, which will provide an outlet. The morbid matter is chiefly to be attended to as affecting the solids or moving fibres of the system; but here it is often beyond our reach, (and

and from this the practice of Purging has been left on a loose footing.

Our 3.^d Object is the obviating the Constriction of the Colon.

When the Constriction is allowed to subsist for any time, then a Purgative was especially necessary, and hence Rheubarb and Calomel was practiced, but if they are not constantly applied the constriction will increase the more from the application of the purgative, for these we know leave the intestines under a degree of Constriction. I take therefore our great improvement in this practice to consist in our giving mild purgatives, as Manna, Oil, &c.; and our medicines should be constantly employed to keep up the Peristaltic motion and obviate the constriction that here always ensues.

Dr Young alleges that Dysentery might always have been cured by the use of Mild Purgatives. But no one has better understood this than Zimmerman of Switzerland. His practice is to give in the beginning an Emetic, and he observes that this will take off the gripes and occasion the disappearance of the tenesmus, yet the effects are not durable; he therefore exhibits Chrysol. Tart. half an ounce dissolved in
one

one pound of barley water, and afterwards a decoction of 24 drams of Tamarinds in the like quantity of water, & generally by this means, three or four times repeated, he obtains a cure. He sometimes employs Rhubarb, but it did not so well answer as crystals of Tartar or the other mild Laxatives.

He observes that the disease can never be remedied till the bilious matter is evacuated. Here he has in view the evacuation of the Bile, and concludes this to be the cause of the disease. He often found that neither Opium nor Glysters with Gum Arabic relieved the tenesmus and gripes, when a Spoonful, night & morning of the Tincture of Rhubarb relieved them. For this reason he says the tenesmus does not arise from the Mucus being rubbed off from the Pectum, but from some matter in the cells of the Colon. He then only differs from us in imagining a quantity of bilious matter to be retained in the Colon, whereas we imagine it to be the feculent matter.

The other remedy is Opium. As the Constriction is undoubtedly Spasmodic, Opium is highly useful; but on another account it is necessary, for the violence of pain urges it very strongly. — It is necessary that these constant constrictions should be moderated by

by the use of Opium. It indeed stops the evacuation, but this is only temporary, and immediately on the cessation of its action the evacuation returns.

In the course of this disease however, I allude there is no evacuation of morbid matter; there is no evacuation going on but the fruitless efforts of the Rectum. The use of Opium however may sometimes be hurtful in this disease, for though it takes off the constriction of the Colon, yet it so far suspends the action of the smaller guts, which are the powers on which we depend for moving the Colon. Hence it may affect the radical cure of the disease, and it is to be feared after Opium has been given that the constriction of the Colon will return with greater violence than before. We therefore should never trust to Opium alone; and if the Opium supercedes the use of, or prevents the proper operation of, Purgatives, it is pernicious.

As Purgatives are to diminish the pain, relieve the Tenesmus, and overcome the constriction, these may supercede the use of Opium; and accordingly we find practitioners, who were fond of Purgatives, neglected Opium.

As this disease may be considerably varied, it may occasionally require many other remedies. — It has

has been questioned whether or not the cure of Dysentery ought not to be begun by Bleeding?

With regard to this, if an Inflammatory Diathesis should appear, bleeding may be necessary; but I think if Inflammation takes place it generally supervenes upon the topical Irritation. The fever is very generally putrid, and Bleeding is seldom necessary unless in plethoric and robust constitutions, at the beginning of the disease. In my opinion therefore, Bleeding is very seldom necessary.

Emetics. Sometimes the Stomach is affected with a quantity of Bile; when I think it proper to begin the cure by Emetics and repeat them as often as the Nausea, quantity of bile &c, appears to be more or less. —

I even go farther, and say that Dysentery may be entirely cured by Emetics alone; but then they must be so managed as to have purgative effects. But

I do not think these so proper as purgatives themselves, for the former keep the patient in continual uneasiness, by their Nausea &c. —

Dr Donald Monro observes that the disagreeable Nausea, kept up by small doses of Tartar Emetic, made his patients absolutely refuse it.

When flatulency and acescency arise in the Stomach

Stomach, Absorbents are admissible, but when the Stomach shows a tendency to putridity Acids must be given; hence the benefit of fresh fruits and the fermented Acids, as also the fossil acids, all which, besides their antiseptic properties, act also as Ecoprotics.

The Symptoms manifest a source of Acrimony, & hence Demulcents, both Mucilaginous and oily, have had a great character. Demulcents probably operate by enveloping the Acrimony, and by lubricating and relaxing the Intestines; hence I have found Oils Ecoprotic—perhaps no more convenient remedy could be pitched upon than the *Oleum Picini*.—I have said that quieting violent pains in this disease by Opiales is very often necessary; but, whenever the use of Opiales is doubtful, we may substitute Somentations of the lower belly, and whenever the pains are fixed in one place Blisters may be used.

When the tendency to putrefaction appears considerable, our medicines must be particularly directed to this, and hence Acids are of great use, but it is often necessary to add to these the use of *Bark*.

Bark, besides its antiseptic power which is doubtful, may have two other effects.

1. When

1. When we observe the putrid tendency accompanying the disease to occasion great debility, so as to render it suspicious that the topical Inflammation of the Intestines, if it exists, should proceed to the gangrenous state; and,

2. When the fever attending the Dysentery is periodical.

Astringents. If the disease is considered as founded in an increased secretion, then astringents might be early administered; but the Dysentery on the contrary consists in an increased constriction, and hence Astringents are never applicable while proper Dysentery subsists. It is only in case of a Diarrhoea supervening on a Dysentery that Astringents can be properly applied. Few Dysenteries I believe are cured by them, and while the Tenesmus and small mucous stools subsist, they can be never applied with propriety.

But when the disorder has subsisted long, the constriction is taken off, the Stools are more frequently copious, and an actual Diarrhoea arises from the weakness of the patient; it is then Astringents may be used. ~

End of the third Volume.

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